Pangu I3-C 3D Printer user manual

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Pangu I3-A 3D Printer user manual

CATALOG

1. PREFACE

Thank you for purchasing Pangu I3 product series-Pangu I3-A 3D printer.It is a wood-frame, base, extruder , heated bed assembled.Before purchase, please look rp3d manufacturers -Shenzhen rp3d technology co.ltd. rp3d technology co.ltd is the first professional 3D printer and peripheral products development , production and sales of technology limited company in Shenzhen.The company has a strong technical force and strong product quality, we can provide you with a 3D printer for professional services.

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1.1. INTRODUCTION

The Pangu i3－A is an improvement of the prusa i3, with the Melzi Electronics and K extruder. It belongs to series of Pangu I3 and was released in December 2013.

1.2. MAIN PARAMETERS

Host software: Repetier-host or Pronterface

Firmware: All of the Pangu I3-A's firmware has finished packing, you need not prepare any firmware.

Build volume: 210x200x195mm, Overall size:440x420x380mm

Printing materials: ABS、PLA、 3mm or 1.75mm diameter thermoplastic.

Build surface: PCB-heated bed to reduce complexity of assembly and to ensure parts do not warp.

Computer interface: USB

Motion: Linear ball bearings on X and Y and Z axes

Pre-soldered electronics with built-in microSD card slot for standalone printing. 。

Enhancements to the printed parts to improve the ease of assembly.

1.3. MAIN IMPROVEMENTS

The following is a list of the main improvements made on the original Prusa ：

The whole frame is made of wood; wood thickness is 6mm/0.24 inch.

Enhanced frame rigidity , easy to assembly.

All are linear bearings

Square M3 Nuts(new improvements from 2014.1.9)

Preassembled MK2 Heated bed and K Extruder

The belts were GT2 belts and professional belt pulleys

GT2The belts were GT2 belts and professional belt pulleys

Professional Couplings

The Z axis is M6 threaded rod

X ends were redesigned for M6 threaded rod and the X endstop

2. PACKING LIST

2.1. OPEN THE BOX

Use a knife to open the Pangu I3-A boxes in which are boxes/packages .





2.2. PANGU I3-A BOM

Item	Description	Qty.	Unit.	Remark.
1	Extruder	1	Kit	Pre-assembled K Extruder with Nozzle and Fan.
2	Heated bed	1	Kit	Pre-assembled Mk2b with glass and Thermistors.

3	Power supply	1	PCS	Mean well NES-200-12
4	Melzi Electronics	1	PCS	Firmware is ready
5	Wood-Frame	1	Kit	Drawing number: pangu_i3_20131225
6	Printed parts	1	Kit	For Pangu I3-A.
7	M6 threaded rods	2	PCS	About 295mm, for Z.
8	M8 threaded rods	4	PCS	About 215m, for base、 Filament
9	M8 threaded rods	3	PCS	About 290mm, for base、 Filament
10	M8 threaded rods	2	PCS	About 415mm, for base.
11	Ø8 Smooth rods	2	PCS	About 384mm, for X axis.
12	Ø8 Smooth rods	2	PCS	About 405mm, for Y axis.
13	Ø8 Smooth rods	2	PCS	About 320mm, for Zaxis.
14	Nylon spacer	4	PCS	For the Melzi Electronics
15	Winding tube	2	M	For finishing wires
16	625 Bearing	4	PCS	For XY idler
17	Linear Bearings	10	PCS	LM8UU, Pre-assembled into the print-ed parts
18	Motor	4	PCS	X、Y axis with one ,Z axis two
19	Couplings	2	PCS	With hollow screws, 2kits
20	Belt	2	M	GT2-6mm，X、Y axis with one meter.
21	Pulley	2	PCS	For X and Y, with hollow screws.
22	Endstop	3	PCS	With wires
23	USB cable	1	PCS	Used to connect the computer.

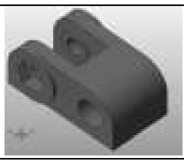
24	wire connector	2	PCS	For Z axis motor wires series connection
25	Zip tie	20	PCS	
26	Power line	1	PCS	Connect the power supply
27	Red and black wires	2	PCS	Connect the power and Melzi Electronics.
28	M5 nut	2	PCS	For X、Y axis idler
29	M5*20 bolt	2	PCS	For X、Y axis idler
30	M4*20 bolt	2	PCS	To fix the extruder on the X carriage
31	M4 nut	2	PCS	To fix the extruder on the X carriage
32	M4*10 bolt	4	PCS	To fix the power supply on the wood-frame
33	M8*30 washer	4	PCS	To fix the wood-frame and the base
34	M8 Locknut	4	PCS	For base.
35	M8 nut	36	PCS	For base.
36	M8 washer	40	PCS	For base.
37	M3*16 bolt	36	PCS	To fix the wood-frame
38	M3*10 bolt	10	PCS	To fix the Z axis motorto and the wood-frame
39	M3*12 bolt	6	PCS	To fix the Y axis motor and Melzi Electronics.
40	M3*20 bolt	4	PCS	To fix the X motor.
41	M3 nut	15	PCS	To fix the wood-frame
42	M3 square nut	26	PCS	To fix the wood-frame
43	M3 Locknut	4	PCS	To fix the Melzi Electronics.
44	M3 flat washer	36	PCS	To fix the wood-frame

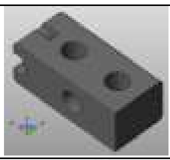
45	M3 spring washer M3	36	PCS	To fix the wood-frame.
46	M3*25 bolt	1	PCS	Z-axis end stop is triggered by it.
47	M2*16 bolt	6	PCS	To fix the end stop.
48	M2 nut	6	PCS	To fix the end stop.
49	M6 nut	2	PCS	For Z axis M6 threaded rods.

2.3. PRINTED PARTS

The [pangu i3B stl] for the pangu i3-A has all the STL files you need in order to make the printer.

The following is a list of what needs to be printed:

Item	Photo	STL name	Qty.	RP3D P/N
0	Printed Parts			02020000
1		Y_Idler.stl	1	02020001
2		Y_Motor_Mount.stl	1	02020002
3		Y_Busing.stl	3	02020003
4		Endstop_Holder.stl	2	02020004
5		Y_Belt_Clamp.stl	1	02020005
6		X-End_Motor.stl	1	02020006

7		X_End_Idler.stl	1	02020007
8		X_Carriage_Belt_Clamp.stl	1	02020008
9		X_Carriage.stl	1	02020009
10		Bar-clamp .stl	2	02020010
11		K_Extruder_base.stl	1	02020011
12		K_Extruder_ Spring_Holder.stl	1	02020012
13		K_Extruder_ Bearing_Holder.stl	1	02020013
14		Y_Corners.stl	4	02021001
15		Filament_holder.stl	2	02021002

2.4. PANGU I3-A TOOL BOX

Item	Name	Qty.	Unit.	Specification.
1	Hexagon wrench	1	PCS	1.5mm
2	Hexagon wrench	1	PCS	2.0mm
3	Hexagon wrench	1	PCS	2.5mm
4	Watch opener	1	SET	
5	High-temperature adhesive tape	1	Spool	5mm
6	High-temperature adhesive tape	1	Spool	50mm
7	Three pieces of wood carving knife	1	SET	
8	Tape	1	PCS	1.5m
9	Cutting nippers	1	PCS	
10	Nipper pliers	1	PCS	
11	Open spanner	1	SET	
12	Nippers	1	PCS	

13	Grease	1	bottle	
14	SD card	1	PCS	2GB,with fat file system, support off-line print, user manual, driving pro-gramm, STL, control software inside.
15	Card Reader	1	PCS	
16	USB wire	1	PCS	Included in the list of I3-A BOM
17	Zip tie	20	PCS	Included in the list of I3-A BOM
18	Winding tube	4	M	Included in the list of I3-A BOM
19	Clip	4	PCS	Have been assembled in the heated bed.
20	Leather working gloves	1	SET	
21	Filament	5	M	ABS Ø3mm
22	Drill bit	1	PCS	0.4mm
23	Drill bit	1	PCS	3mm
24	Back-up screws and nuts	1	BAG	
25	502 glue	1	bottle	

3. ASSEMBLY 3D PRINTER

Before you begin

This document will guide you through putting together your Pangu I3-A 3D Printer. Please read it through briefly before starting your build, and make sure you have everything you need to continue. It's frustrating to be stuck with a half-finished machine because you are missing a part or tool.

3.1 ASSEMBLE THE Y AXIS

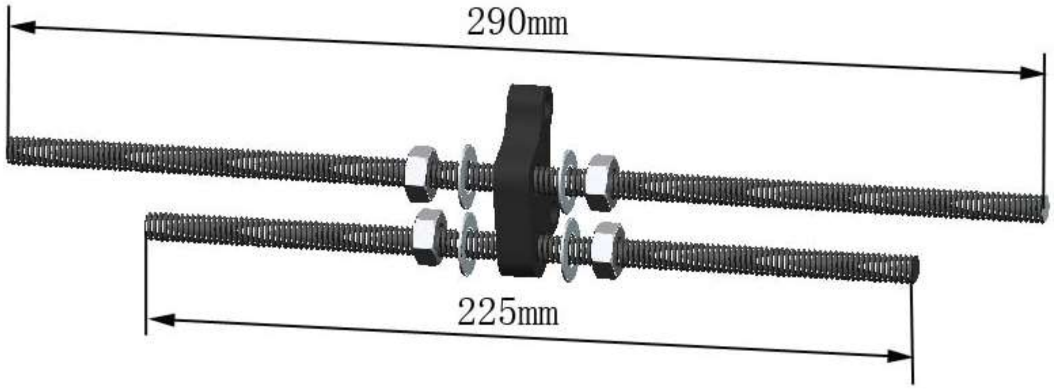
3.1.1 ASSEMBLE THE Y AXIS BASE



Things needed:

English	
1 x Y-motor-bracket	
1 x Y-Idler	
4 x Y-corner	
22 x M8 nuts	
12 x M10 nuts	
22x M8 washers	
4x M10*30 washers	
8x M10 washers	
4 x M8 215mm threaded rod	
2 x M10 415mm threaded rod	

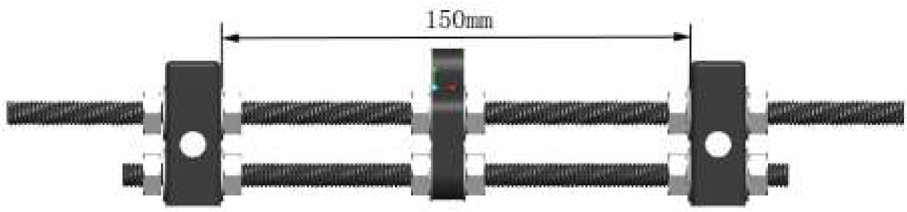
3.1.1.1 STEP ONE : ASSEMBLE THE Y_MOTOR_MOUNT



3.1.1.2 STEP TWO : ASSEMBLE THE Y_CORNER



3.1.1.3 STEP THREE : TIGHTEN THE NUT , FIXED FRAME FOOT ,TO ENSURE THAT THE GASKET IN THE TWO-FOOT DISTANCE IS 150MM



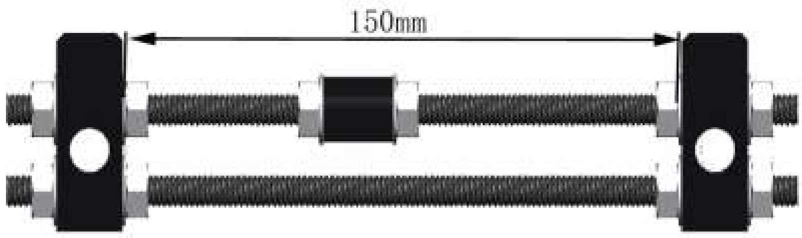
3.1.1.4 STEP FOUR : ASSEMBLE THE Y-IDLER



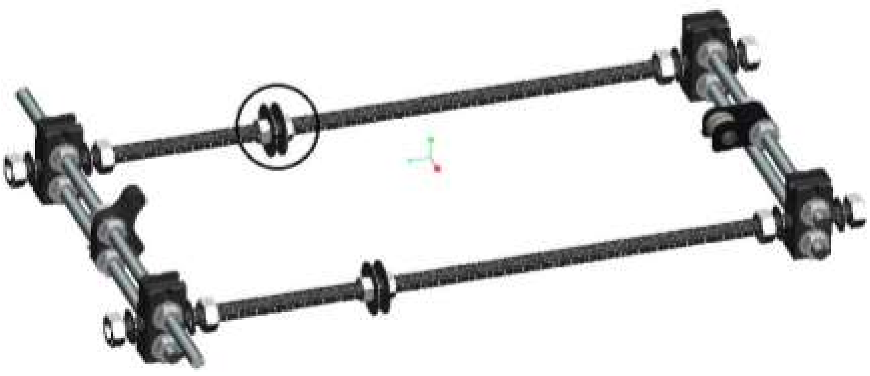
3.1.1.5 STEP FIVE : ASSEMBLE THE Y-CORNER



3.1.1.6 STEP SIX : FIXED FRAME FOOT ,TO ENSURE THAT THE GASKET IN THE TWO-FOOT DISTANCE IS 150MM , TIGHTEN THE NUT.

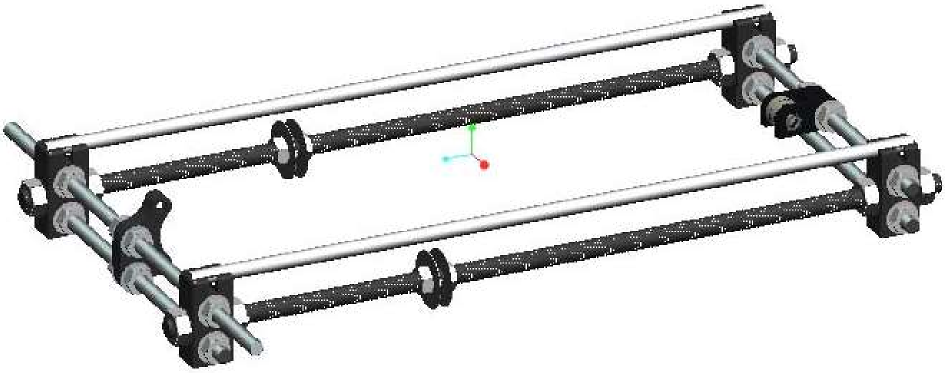


3.1.1.7 STEP SEVEN : USE TWO M10*415MM THREADED RODS TO CONNECT THE ASSEMBLED Y_CORNER





3.1.1.8 STEP EIGHT : ADJUST THE DISTANCE FROM FRONT- BACK OF Y_CORNER , MAKE THEM TO PUT IN THE SMOOTH RODS JUST TWO Ø8*405MM ,TIGHTEN THE NUT



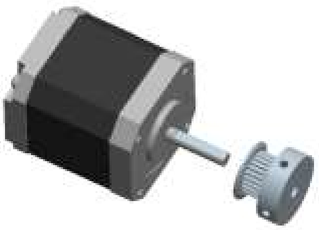
3.1.2 INSTALL THE Y AXIS MOTOR



Things needed:

English	
1 x Y-motor	
1 x Pulley	
2 x M3*4 Jackscrew	
2 x M3*10 bolts	

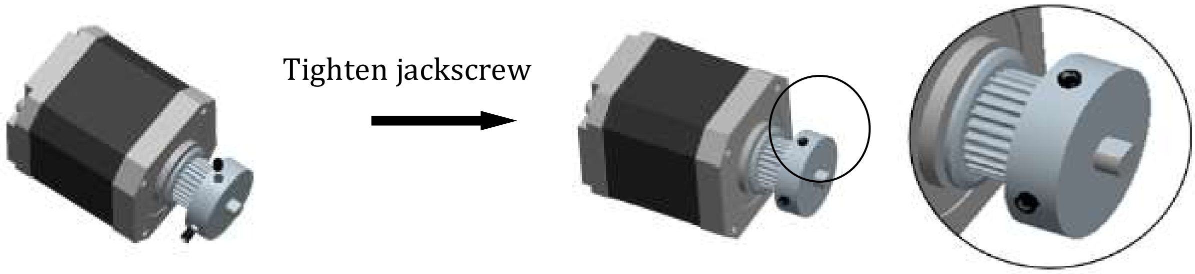
3.1.2.1 STEP ONE: INSERT PULLEY IN Y-MOTOR



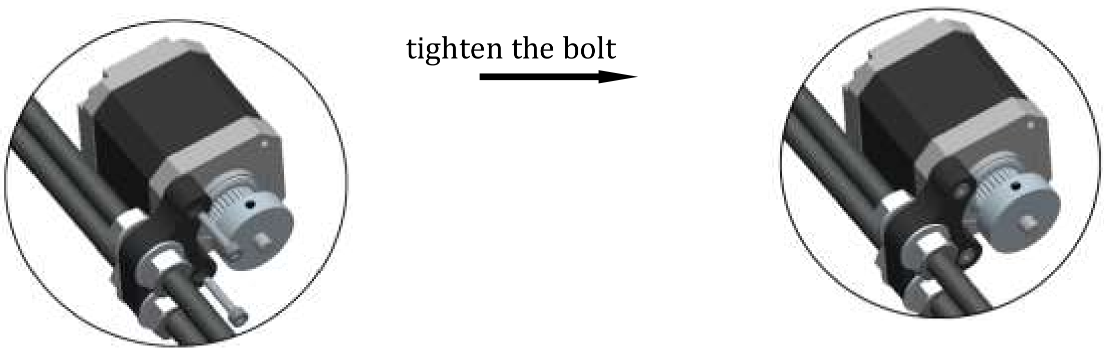
hole perpendicular D surface



3.1.2.2 STEP TWO : SCREW THE JACKSCREW INTO BOLT'S HOLE, ONE OF A BOLT HOLE PERPENDICULAR MOTOR D SURFACE



3.1.2.3 STEP THREE : USE BOLT TO ASSEMBLE THE ASSEMBLED MOTOR TO FIX ONTO THE MOTOR-BRACKET (SEE THE FOLLOWING PICTURE)



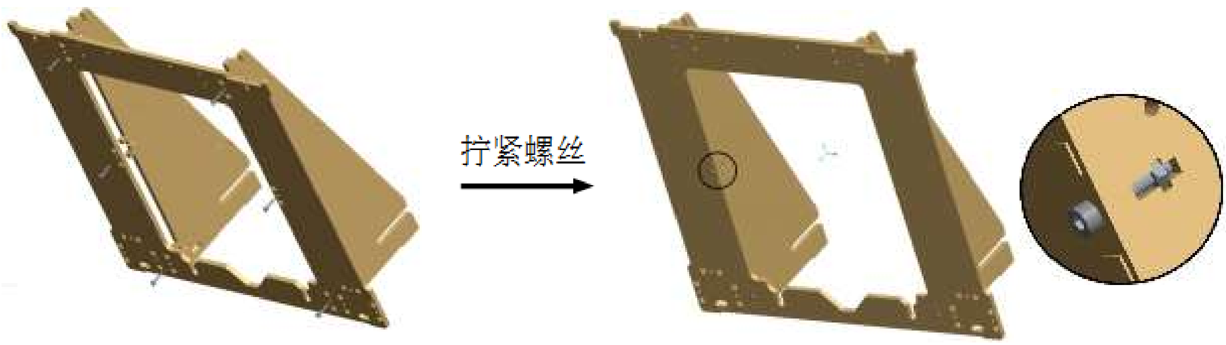
3.2. ASSEMBLE WOOD—FRAME

3.2.1 INSTALL PRINTED PARTS OF WOOD—FRAME



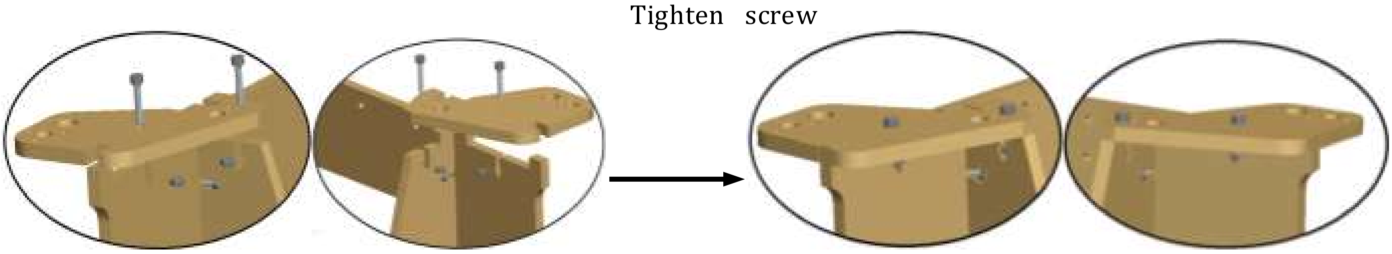
Things needed:	
English	
1x Wood- board -Frame	
2x Wood-side -Frame	
2x Z axis cover-wood motor-holder	
4x Z axis side-wood motor-holder	
20x M3*16 bolt	
20x M3 square nut	

3.2.1.1 STEP ONE : ASSEMBLE THE SIDE WOOD FRAME

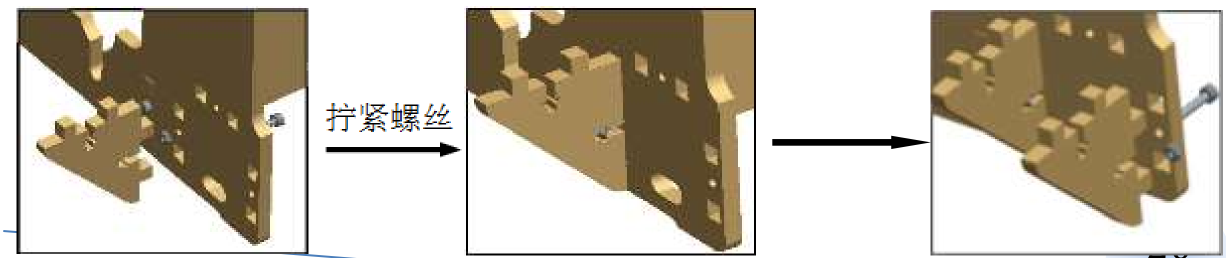


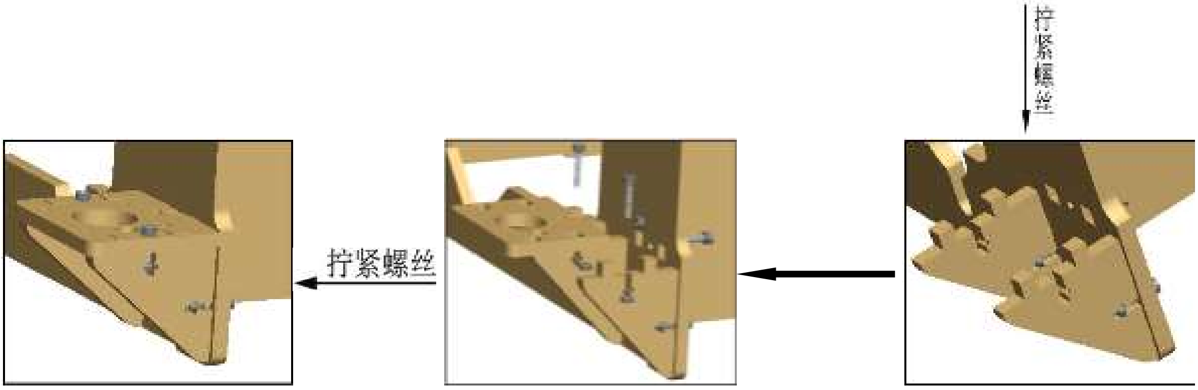
3.2.1.2 STEP TWO : ASSEMBLING FRAME FIXED BOARD

Tighten screw

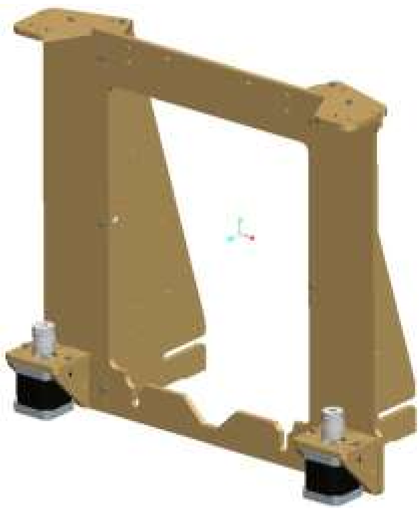


3.2.1.3 STEP THREE : ASSEMBLE THE Z_MOTOR_MOUNT





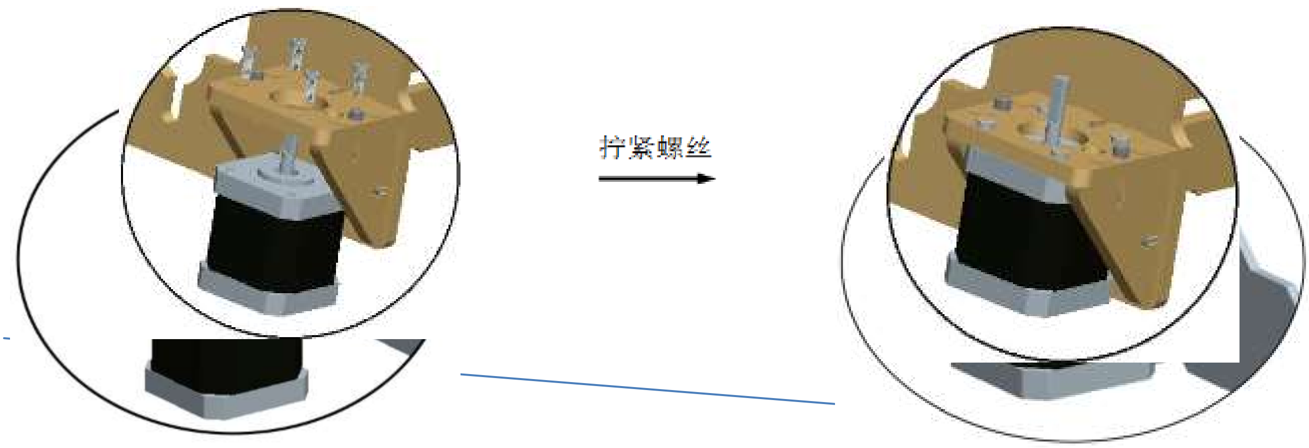
3.2.2 INSTALL THE Z AXIS MOTOR AND COUPLINGS



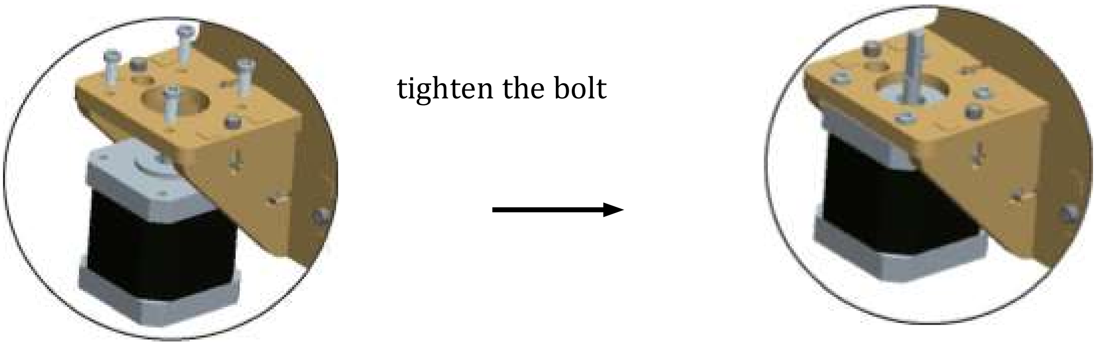
Things needed:

English	
2 x Z-motor	
2x Couplings	
8 x M3*10 bolts	

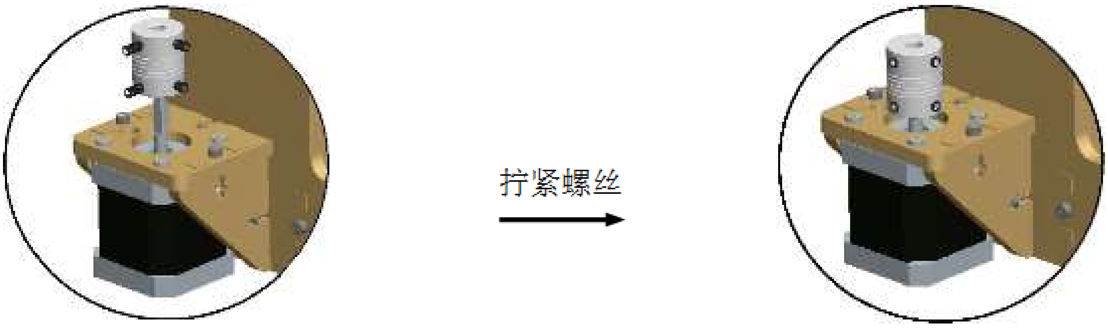
3.2.2.1 : STEP ONE : ASSEMBLE THE ELECTRIC MOTOR 1



3.2.2.2 STEP TWO : ASSEMBLE THE ELECTRIC MOTOR 2



3.2.2.3 STEP THREE : ASSEMBLE THE COUPLINGS, JACKSCREW PERPENDICULAR D SURFACE



3.2.3 FIXED WOOD-FRAME

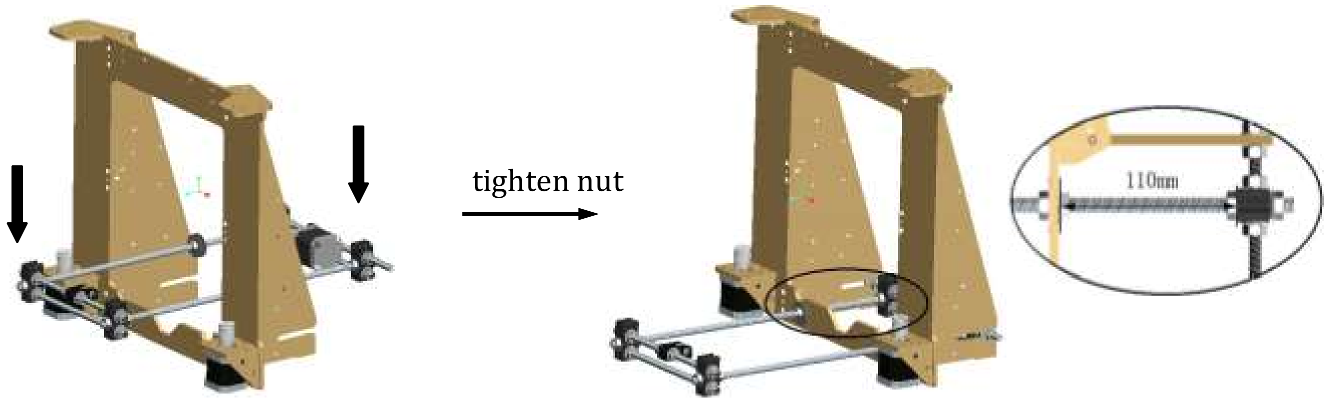


Things needed:

English	
1 x Assembly Y-base	

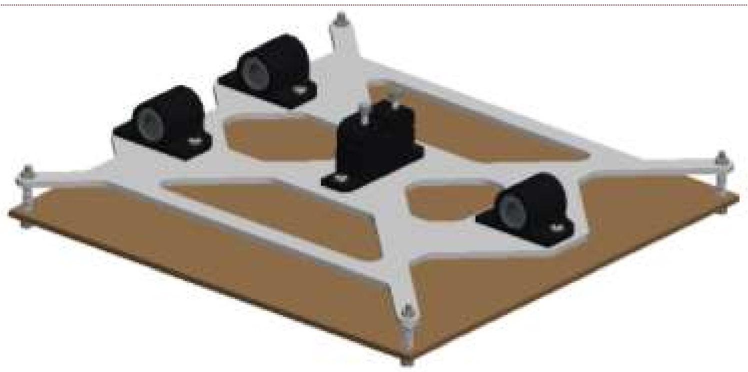
2x Assembly wood-frame	

3.2.3.1 STEP ONE : PUT THE BASE INTO THE WOOD FRAME, ENSURE THAT THE DISTANCE BETWEEN THE TWO GASKET FOR 110MM, TIGHTEN THE SCREW



3.3. ASSEMBLE THE HOT BED

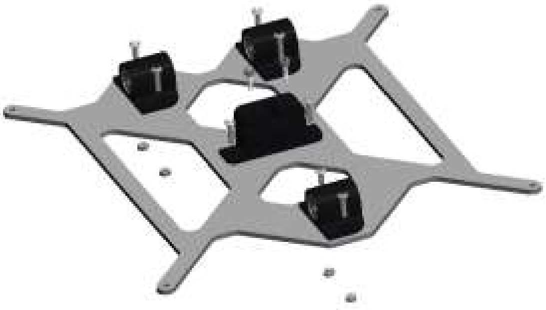
3.3.1 ASSEMBLY HOT BED ACCESSORIES



Things needed:	
English	
1 X 220*200*5mm glass	
1X 220*200*3mm Wood	
1 X Hot-bed-PCB	
1 XAlu- base-board	
3X Y_Busing	
1 X Y_Belt_Clamp	

12 X M3 nuts	
8 X M3*16 bolts	
2 X M3*12 bolts	
4X M3*25 bolts	
8x M3 washers	
4x Ø6*25 Spring	

3.3.1.1 STEP ONE : INSTALL THE HOT BED PRINTING



Tighten the bolt



3.3.1.2 : STEP TWO : INSTALL THE HOT BED TEMPERATURE PROBE





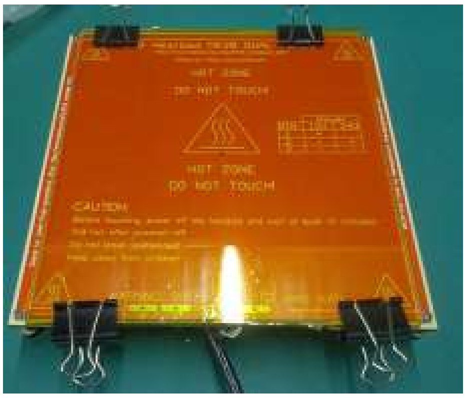
3.3.1.3 STEP THREE : FIXED HOT BED PCB BOARD AND WOOD BOARD



Tighten the bolt



3.3.1.4 STEP FOUR : USE NIPPER TO FIXED GLASS, CONNECT THE WINDING TUBE





3.3.2 CONNECT HOT BED AND THE Y AXIS BASE

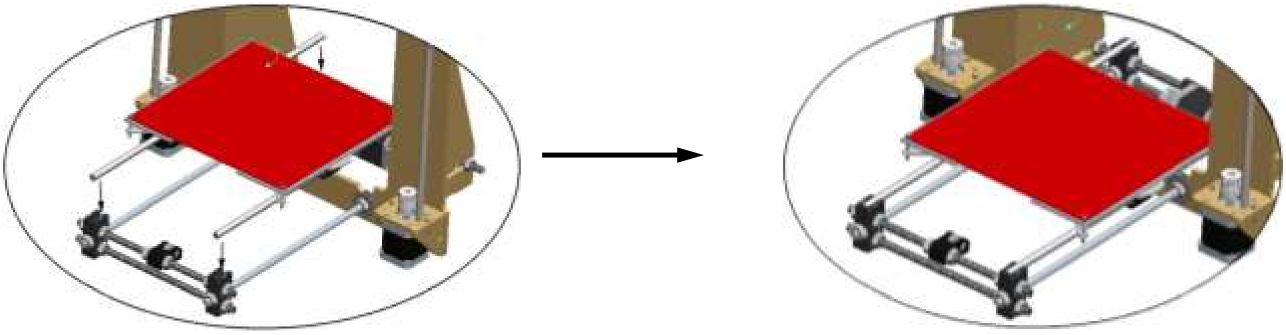


Things needed:

English	
1 X assembled-hotbed	
1X assembled –Y base	
2 X Ø8 Smooth rods	

4X Zip tie	

3.3.2.1 STEP ONE : PUT SMOOTH ROD THOUGH HOT BED LINEAR BEARINGS, INSERT Y BASE



3.3.2.2 STEP TWO : USE ZIP TIE TO FIXED SMOOTH ROD



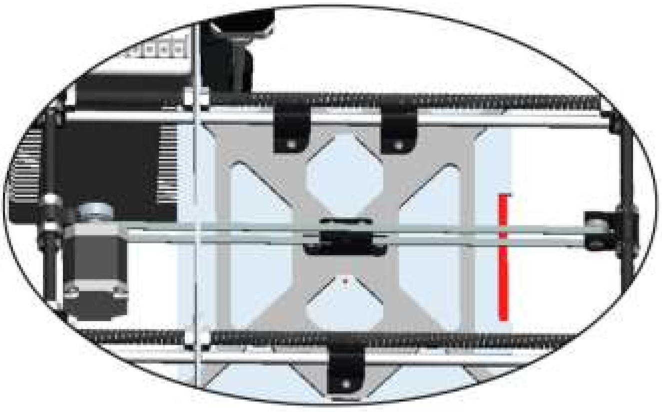
3.3.3 INSTALL THE Y AXIS BELT



Things needed:

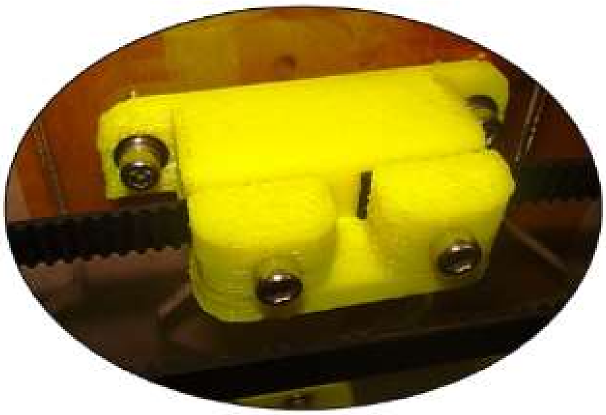
English	
1X GT2-6mm belt	

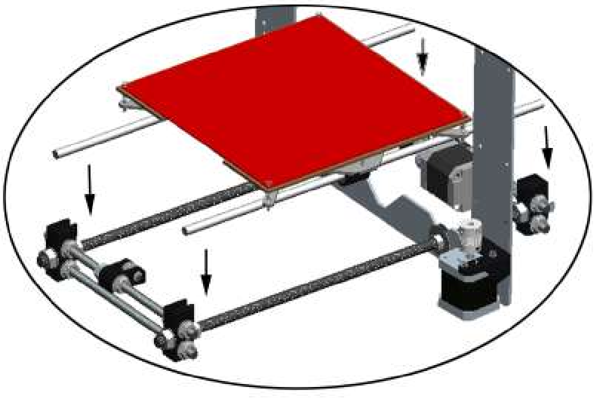
3.3.3.1 STEP ONE : ADJUST Y_MOTOR_MOUNT AND Y-IDLER'S POSITION, MAKE IT IN THE SAME DIRECTION WITH HOT BED BELT_CLAMP

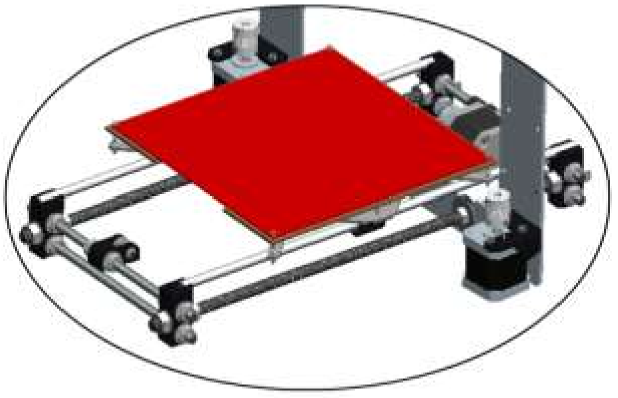


BottomView

3.3.3.2 STEP TWO : STUCK THE BELT ON THE BELT_CLAMP, TIGHTEN THE NUT







3.4. ASSEMBLE THE X AXIS

3.4.1 ASSEMBLE K-EXTRUDER



3.4.1.1 STEP ONE : ASSEMBLE THE 623ZZ BEARING

1.Things needed: Assemble the 623zz bearing

English	
1 x K-Extruder-Bearing-Holder	
1 x 623zz bearing	
1 x M3x16 flat head screw	
1 x M3 Washer	
1 X M3 Spring Washer	
1 x M3 nut	



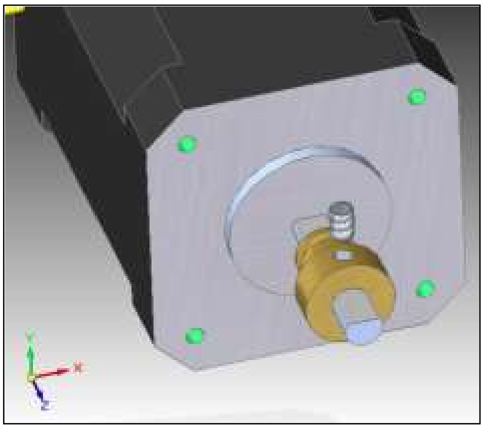
Tighten the bolt



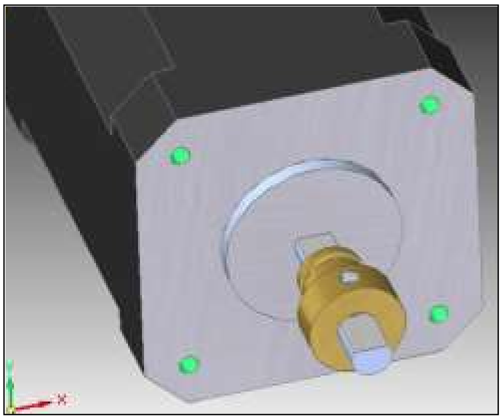
3.4.1.2 STEP TWO : INSTALL THE DRIVING GEAR

2.Things needed:	Install the driving gear
English	
1 x Motor	
1 x extruder driving gear	
1 x M3x4 Hollow-lock socket set screw	

Insert the gear on the motors axis, make sure the distance from the gear to the motor is 6.25mm.



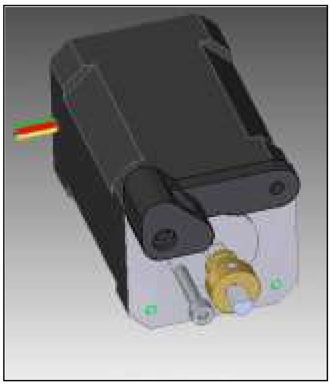
Tighten the bolt



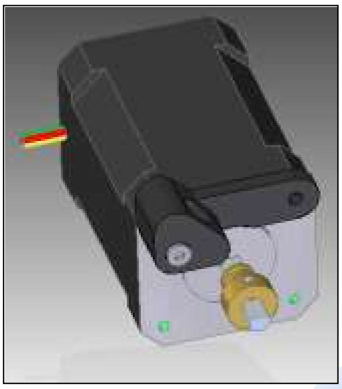
3.4.1.3 STEP THREE : INSTALL THE EXTRUDER SPRING HOLDER

3.Things needed:	install the extruder spring holder
English	
1 x extruder spring holder	
1 x M3x16 screw	

Fix the spring holder with a M3x16 bolt.



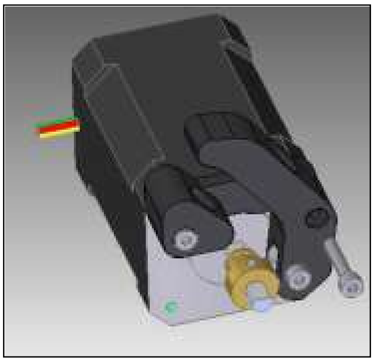
Tighten the bolt

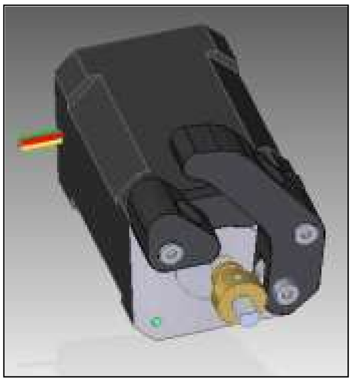


3.4.1.4 STEP FOUR : INSTALL THE EXTRUDER BEARING HOLDER

4.Things needed:	install the extruder bearing holder
English	
1 x M3x16 screw	

Fix the bearing holder with a M3x16 bolt.





3.4.1.5 STEP FIVE : INSTALL THE EXTRUDER SPRING HOLDER

5.Things needed:	Install the extruder spring
English	
2 x extruder spring	

Put the spring between the spring holder and the bearing holder. Maybe you need parallel 2 PCS spring to push the filament on the gear.



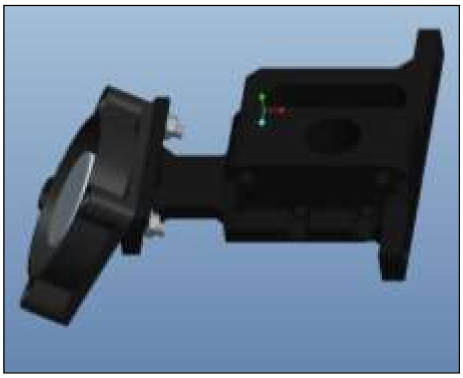
Tighten the bolt



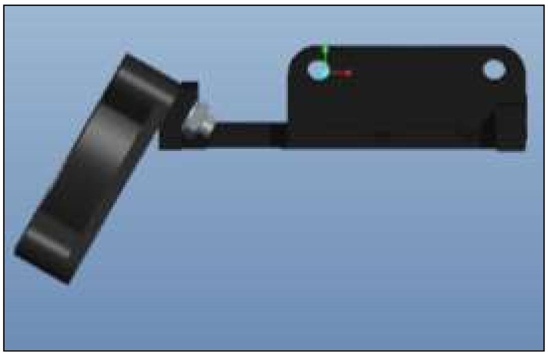
3.4.1.6 STEP SIX : INSTALL THE EXTRUDER FAN

6.Things needed:	Install the extruder fan
English	
2x M3x16 screws	

Fix the fan with the M3x16 screws. Please note the label of the fan face to the holder.



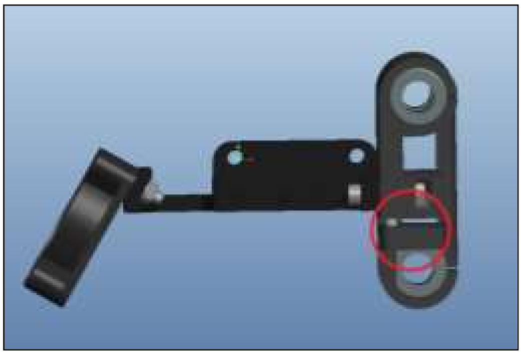
Tighten the bolt

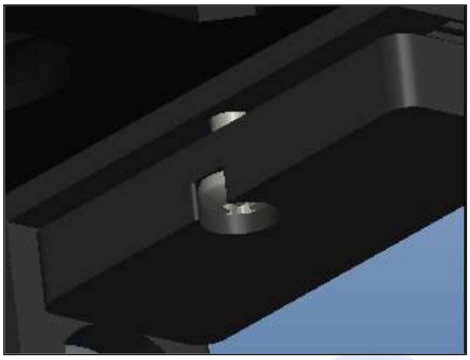


3.4.1.7 STEP SEVEN : INSTALL THE X-CARRIAGE

7.Things needed:	Install the X-Carriage
English	
1 x k-Extruder–Motor-Holder	
1 x X-Carriage	
2 x M3x16 screws	
2 x M3 nuts	
1 x M3x14 screws	
1 x X-Carriage-Belt-Clamp	

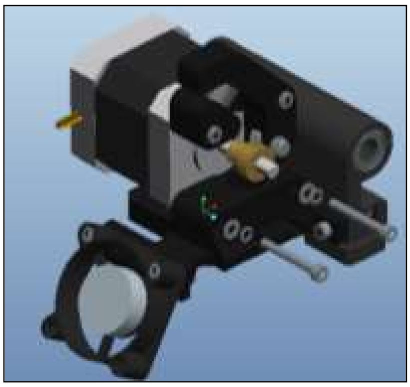
Fix the X-Carriage with the M3x16 screws. Please note the back of the X-Carriage face to the extruder-motor-holder. Fix the X-Carriage with the M3x14 screws. The screw don’t need to tighten.



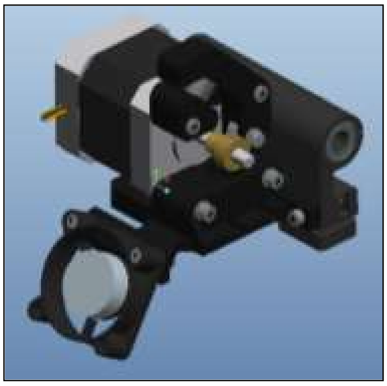


8.Things needed:	Install the extruder motor
English	
2 x M3x30 screws	
2 x M3 washer	
2 x M3 spring washer	

3.4.1.8 STEP EIGHT : INSTALL THE EXTRUDER MOTOR



拧紧螺丝

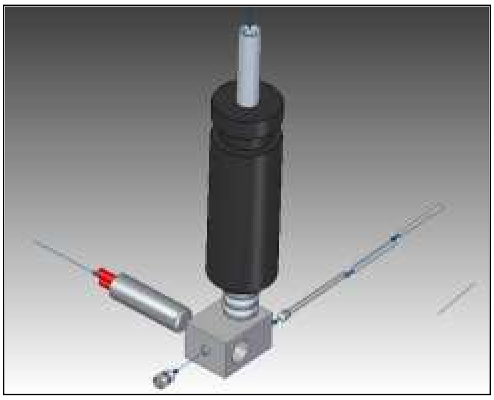


9.Things needed:	Assemble the J head nozzle
English	
1 x J-Head Noz-	
1 x Nozzle Holder	
1 x Heat Cartridge	
1 x PTFE liner	
1 x Thermistor	
1 x Hollow-lock socket set screw	
2 x PTFE tube 0.5mm	
2 x Wire to wire terminal	
2 x 60cm wires for thermistor	

3.4.1.9 STEP NINE : ASSEMBLE THE J HEAD NOZZLE

It is the MKII. Please refer to for more information. It include the nozzle, nozzle holder, ptfe tube, heater, sensor and so on.

J head nozzle assembling picture





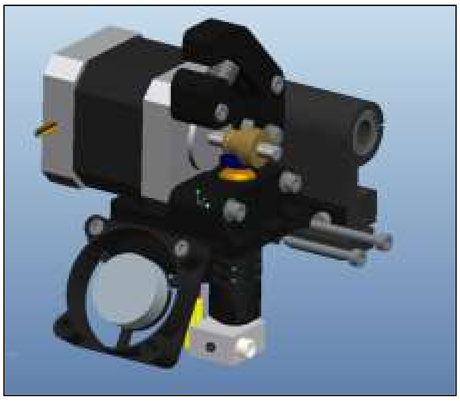
J head nozzle image photo



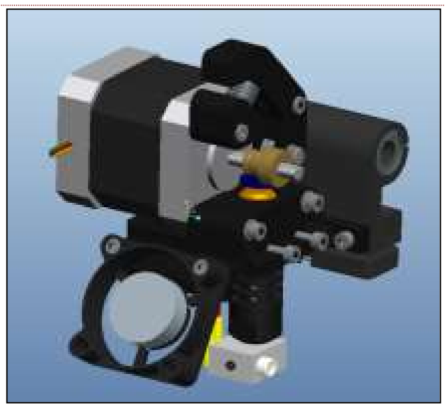


10.Things needed: assemble the K-extruder and extruder	
English	
2 x M3x30 screw	

3.4.1.10 STEP TEN : ASSEMBLE THE K-EXTRUDER



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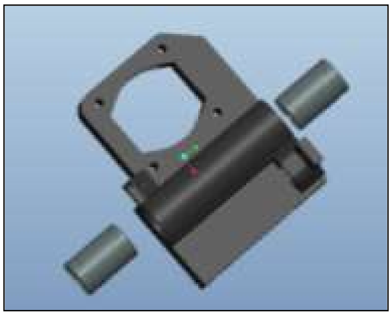


3.4.2 ASSEMBLE THE X AXIS MOTOR-HOLDER AND END_IDLER

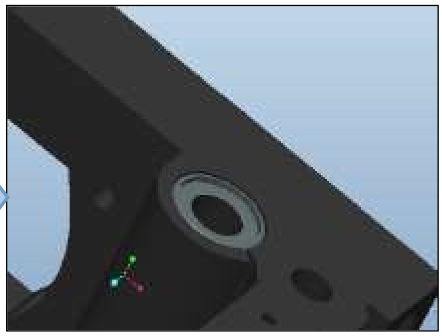


1.Things needed:	Assemble the line bearing
English	
1xEnd-Motor-holder	
2x line bearing	

3.4.2.1 STEP ONE : ASSEMBLE THE LINE BEARING



Push the LM8UU into the Printed part



2.Things needed:	Assemble the X motor
English	
1 x motor	
1x Pulley	
2 x M3*4 Jackscrew	

3.4.2.2 STEP TWO : ASSEMBLE THE END_IDLER

Insert the End_Idler into motor , one of the bolt hole perpendicular D surface



hole perpendicular D surface



Tightening the jackscrew into the bolt's hole . Tighten the jackscrew.



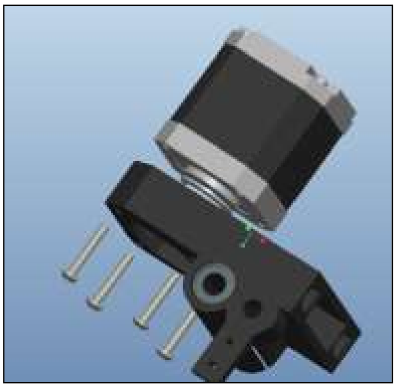
tighten the bolt



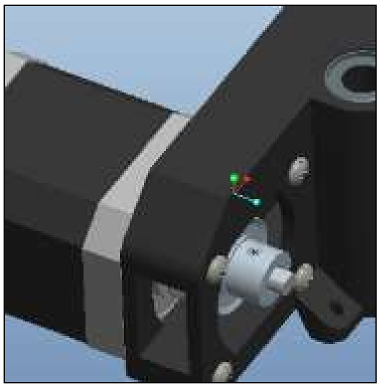
3.Things needed:	assemble the X-motor
English	
1 x Motor (step2)	
1 x End-Motor-holder (step1)	
4 x M3x20 flat head screw	
1 x M6 nut	

3.4.2.3 STEP THREE : ASSEMBLE THE X-MOTOR

Put the motor into the X-motor holder's hole , tighten the bolt.



Tighten the bolt



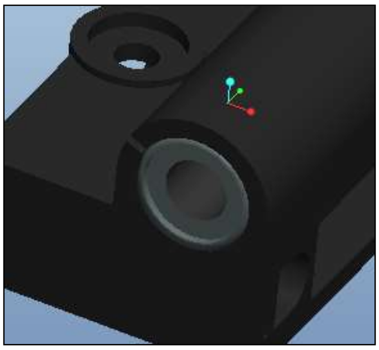
4.Things needed:	assemble the X_End_Idler line bearing.
English	

1x X_End_Idler	
2x line bearing	

3.4.2.4 STEP FOUR : ASSEMBLE THE X_END_IDLER LINE BEARING.



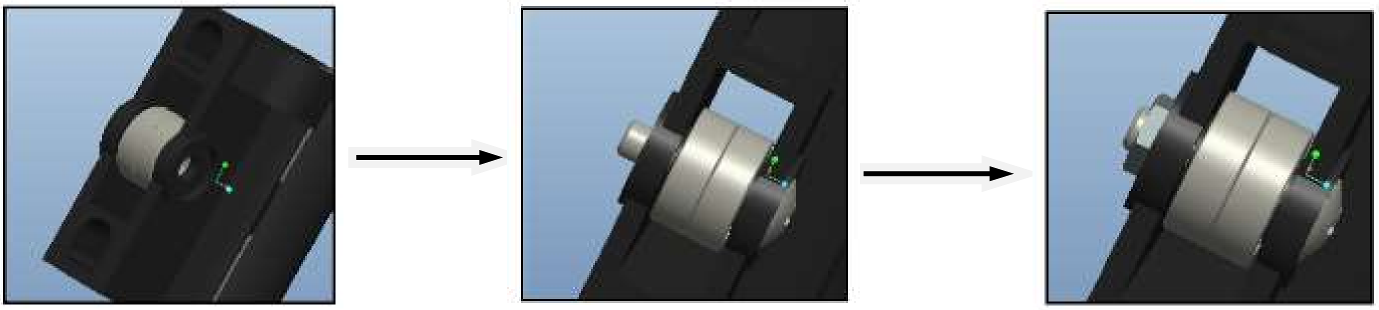
Push the LM8UU into the Printed part



5.Things needed:	assemble the 623zz bearing
English	
1x X_End_Idler （step4）	
2x 623zz bearing	
1x M5*20 nuts	
1x M5 nuts	

3.4.2.5 STEP FIVE : ASSEMBLE THE 623ZZ BEARING

Put the two bearing into the following picture's position , insert the screw , tighten the nut.

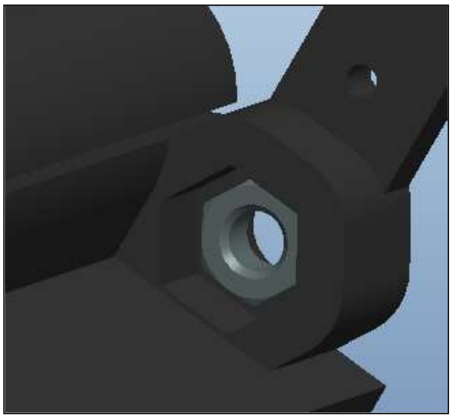


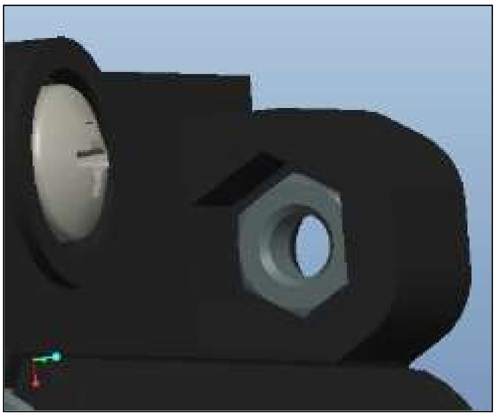
6.Things needed:	assemble the nut
English	
2x M6 nut	
1 x X_End_Idler （step5）	

1 x End-Motor-holder (step3)	

3.4.2.6 STEP SIX : ASSEMBLE THE NUT

Put two M6 nut into the X_End_Idler and the X_ End-Motor-holder's hole, in order to avoid the nut falling off, please use 502 glue around the edges , take care to avoid the glue inflow to the threads.



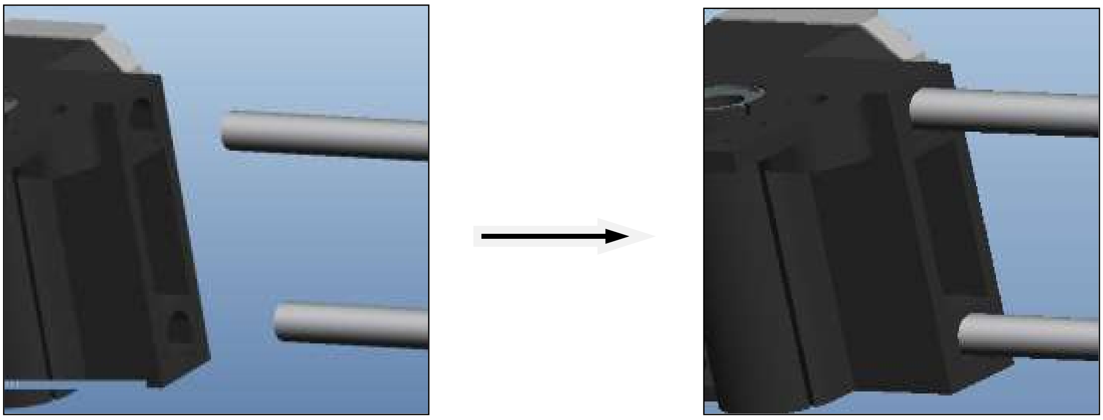


X_Motor_Mount. X_End_Idler

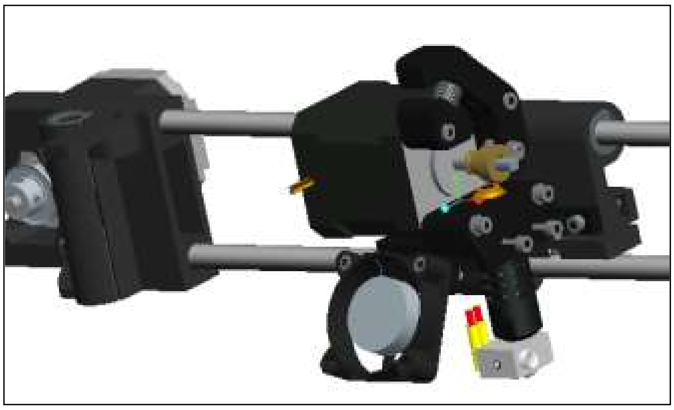
7.Things needed:	assemble the X －axis
English	
2x Ø8*400mm Smooth rods	
1 x X_End_Idler （step6）	
1 x End-Motor-holder (step6)	
1x K Extruder (step4.1)	

3.4.2.7 STEP SEVEN : ASSEMBLE THE X –AXIS

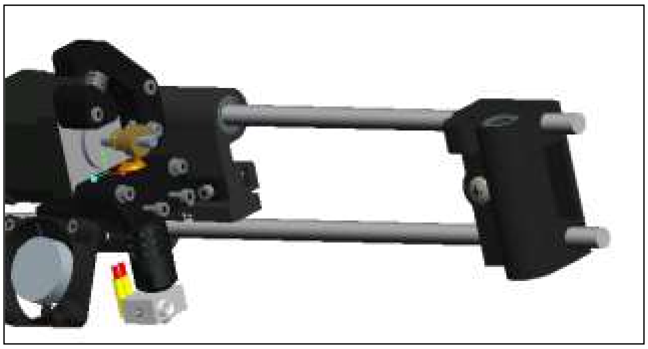
Insert two smooth rods into the End_Idler 's two holes.



3.4.2.8 STEP EIGHT: PUT IN THE K-EXTRUDER ALONG THE SMOOTH RODS



3.4.2.9 STEP NINE : PUT IN THE END_IDLE ALONG THE SMOOTH RODS .



3.4.2.10 STEP TEN : ADJUSTING THE DISTANCE BETWEEN THE CENTER OF THE TWO BEARING

After installed, Adjusting the distance between the center of the two bearing for 361mm.



3.4.3 ASSEMBLE THE X BELT



1.Things needed: Assemble the line bearing	
English	
1x Belt 1m/pcs	

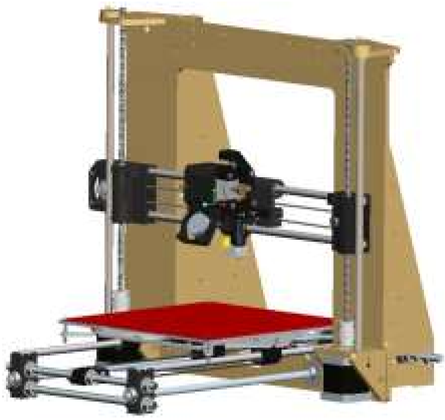
3.4.3.1 INSTALL THE BELT.

Use the Belt_Clamp to clamping the belt, please note the belt to straighten ,not too loose.



3.5. ASSEMBLE THE Z AXIS

3.5.1 INSTALL THE Z AXIS SMOOTH RODS AND THREADED RODS

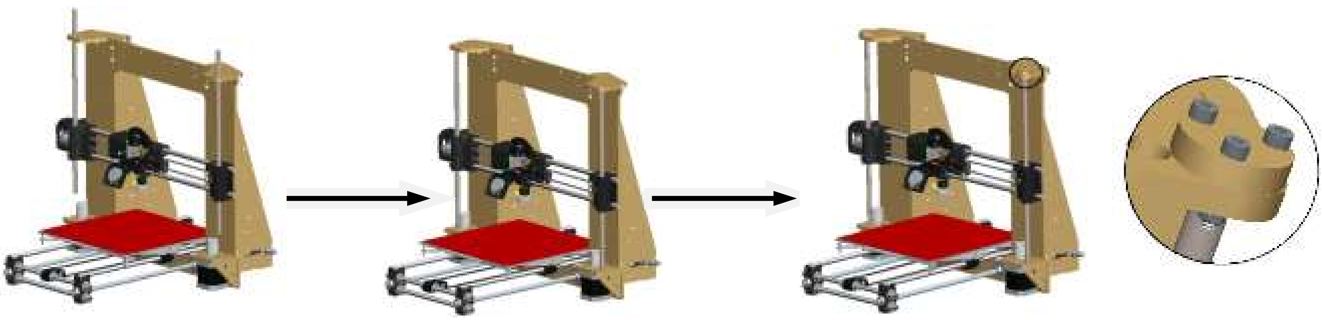


Things needed:

English	
1x assembled frame	
1x assembled X –axis	
1x Ø8 *320 mm Smooth rods	
1x M6*295mm threaded rods	

3.5.1.1 STEP ONE : FIXED THE TWO SMOOTH RODS

The Smooth rods through the top frame printing , X- line bearing, and the bottom frame printing; Smooth rods flush with the top frame printing, and require X –axis should move up and down smoothly.

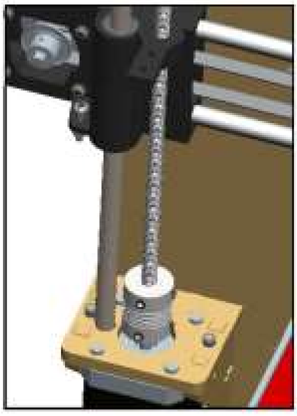


3.5.1.2 STEP TWO : FIXED THE TWO THREADED RODS

Twist the threaded rods to make it through the M6 nut and Couplings tighten the jackscrew.



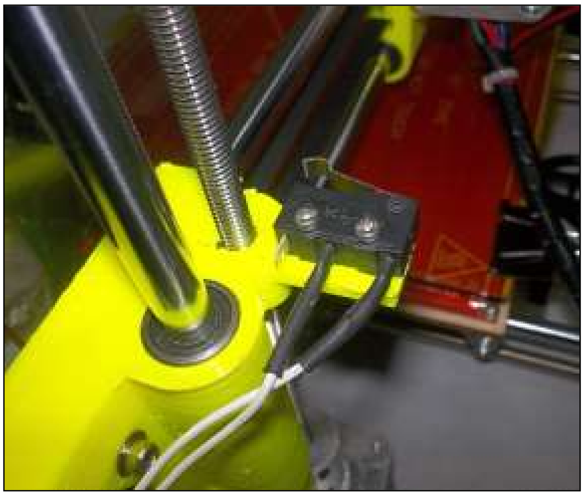
tighten the jackscrew



3.6. INSTALL THE END_STOPS

Things needed:	
English	
3 x End_stops with wires	
6x M2 *16 Bolts	
6 x M2 nuts	

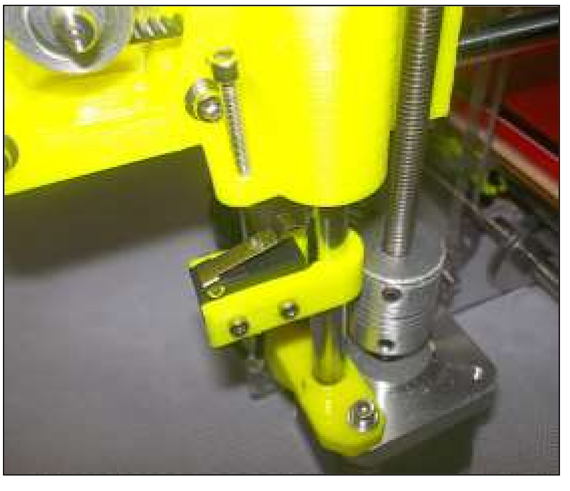
3.6.1 INSTALL THE X AXIS END_STOPS



3.6.2 INSTALL THE Y AXIS END_STOPS



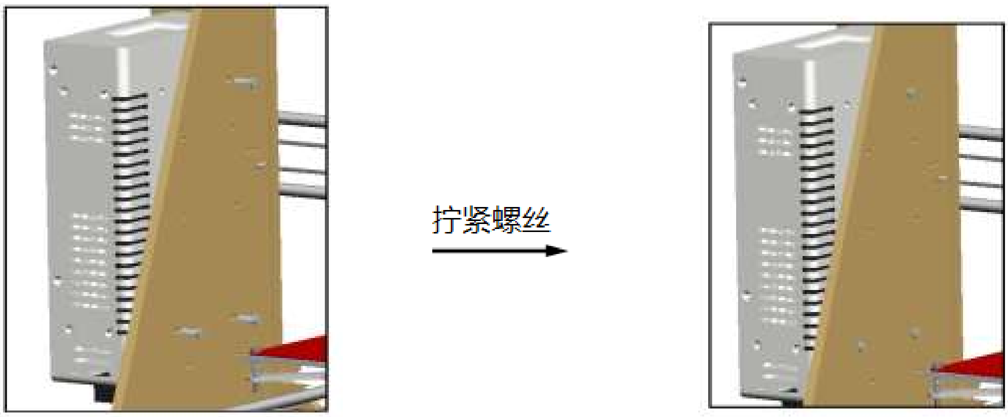
3.6.3 INSTALL THE Z AXIS END_STOPS



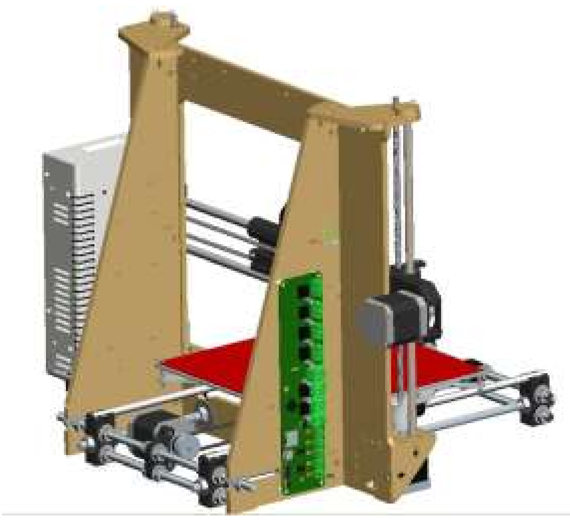
3.7. FIXED POWER SUPPLY

Things needed:	
English	
1x Power	
3x M3 *10 Bolts (1st Power)	
3x M4 *10 Bolts （2nd Power ）	

Put the power supply in the back of Motor_Mount's wood frame, tighten the bolts.

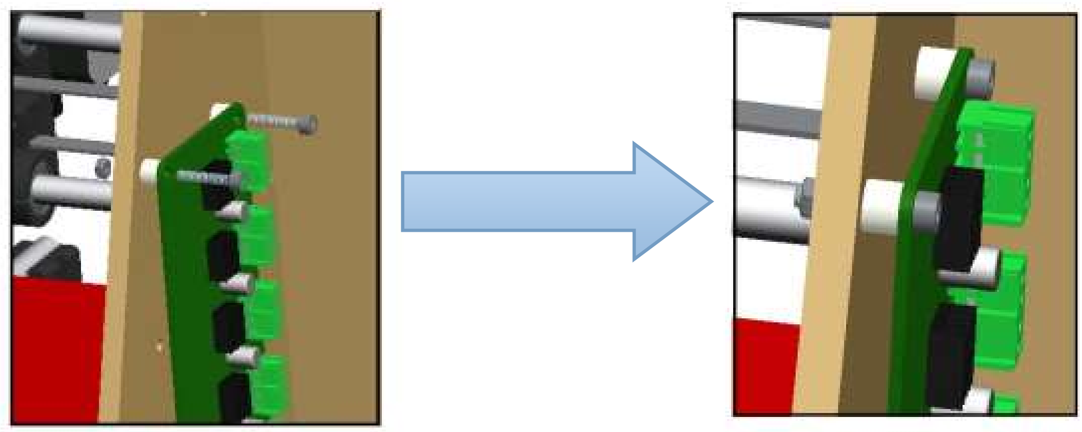


3.8. FIXED PCB



Things needed:	
English	
1x Power	
4x Nylon spacer	
4x M3 *16 Bolts	
4x M3 nuts	

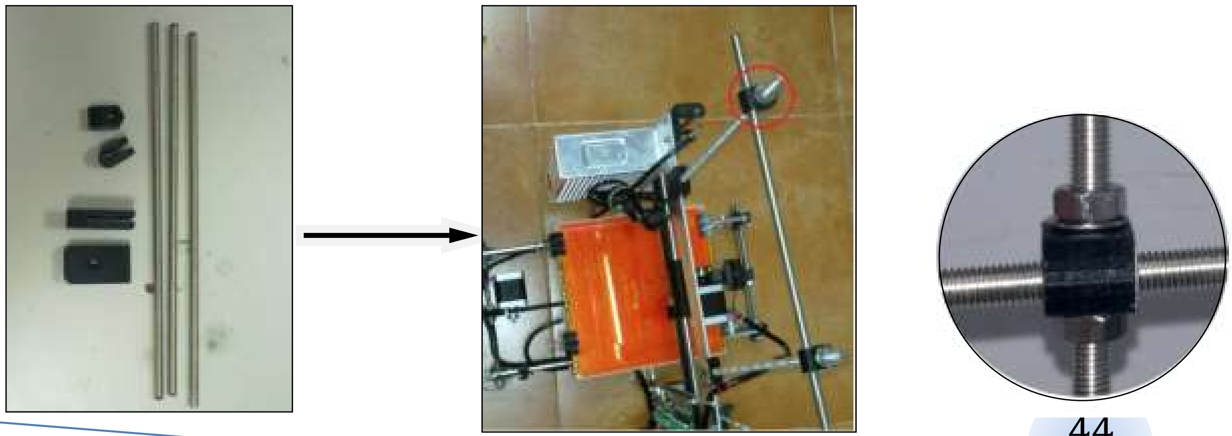
Put the PCB into the correspond hole , add a Nylon spacer, screw the bolt , and tighten the nut, Please note the PCB direction.



3.9. INSTALL THE FILAMENT_HOLDER

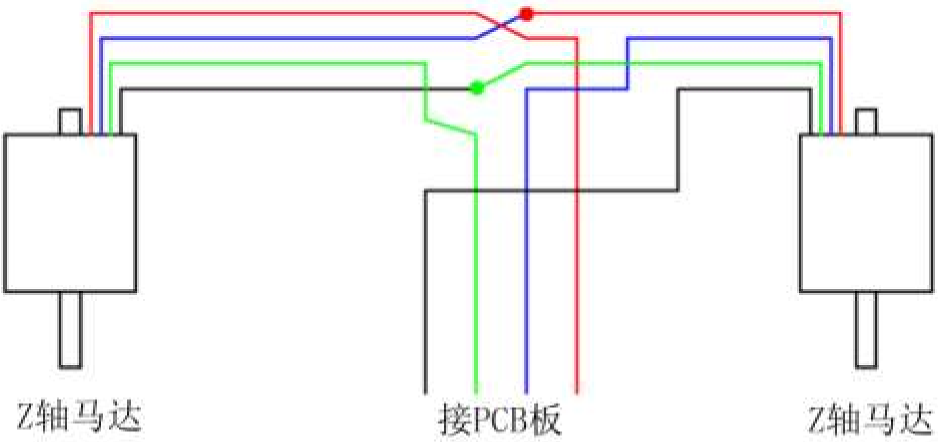
Things needed:	
English	
2x Bar-clamp	
2x Filament-holder	
3x M8 *290 threaded rods	
4x M8 nuts	
4x M8 washer	

Follow the following picture to install the filament_holder, make sure filament is not be touched

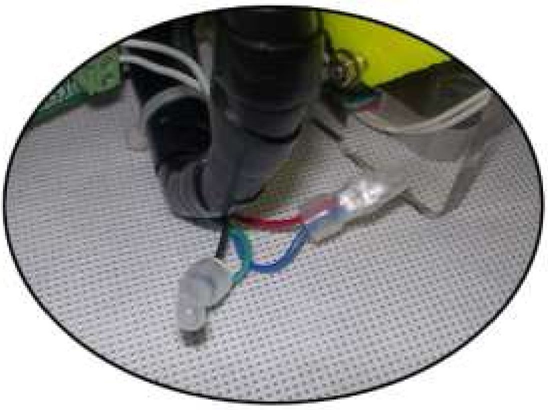


3.10. CONNECT THE 3 D PRINTER

3.10.1 WIRING OF THE Z AXIS MOTOR

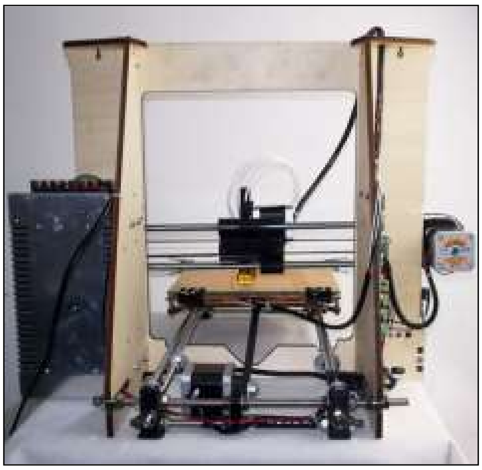


。After connected, put the Pressure line on wire connector, compressed with piler

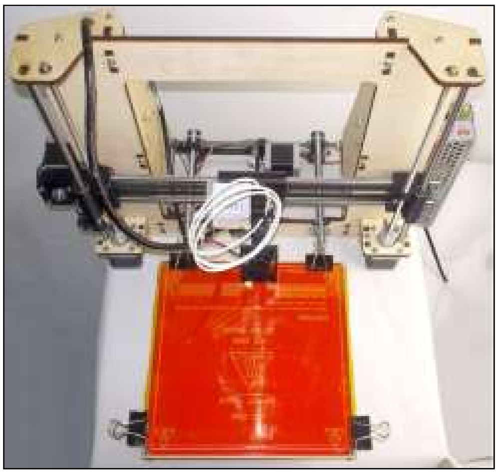


3.10.2 WIRING OF 3 D PRINTER

One thousand individuals have one thousand kinds of wiring connection. Wiring principle: we must have enough travel, but also beautiful, simple operation



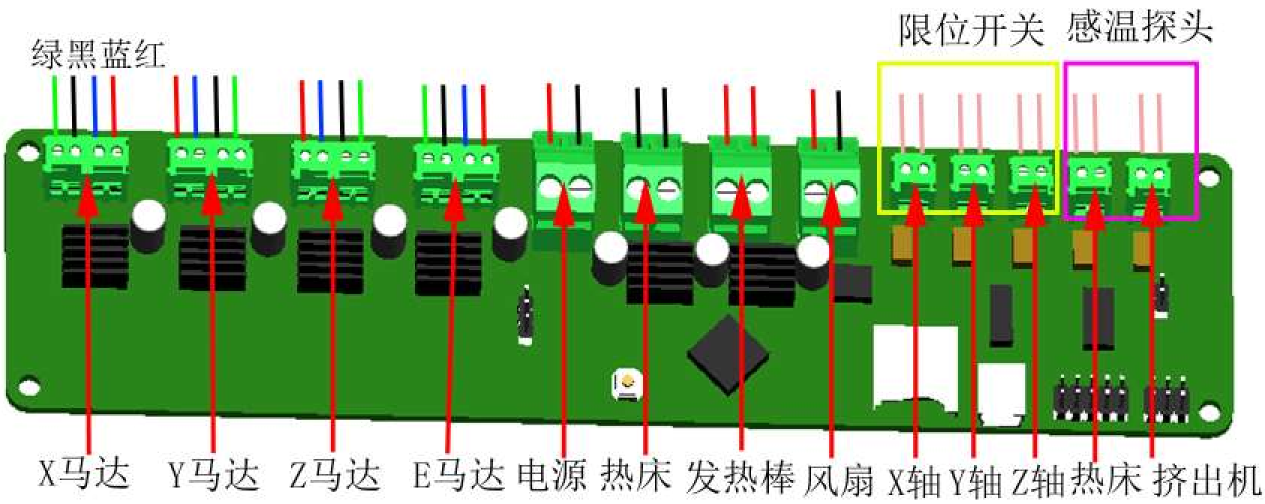
back



front

3.10.3 PCB WIRING PCB

Connect wire from left to right: X_motor line ---Y_motor line----Z_motor line---E_motor line---power supply line---hot bed line---fan line---X_endstops line---Y_endstops line---Z_endstops line ---hot bed temperature probe line---extruder temperature probe line. Connect wire follows color.



3.10.4 THE POWER SUPPLY WIRING

Connect the power supply blue—N brown—L

Connect the red and black wire red—V+ black—V-



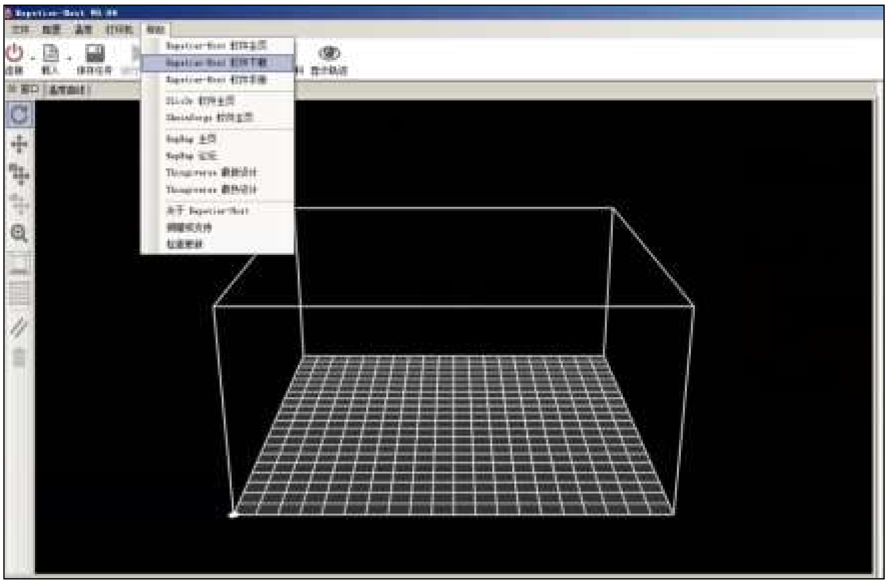
4. INSTALL THE SOFTWARE

4.1. INSTALL REPETIERHOST

There is RepetierHost_V0.84 software installer and user manual on the SD card, which wrote details. V0.84 version is stability, good compatibility, it is recommended to use the V0.84 version. Considering user will upgrade using, xiao bian here to give you an example with WIN7 32 system to introduce RepetierHost_0.95F's install.

Way 1 : You can click RepetierHost_V0.84 menu----help window----check upgrade then upgrade

RepetierHost.



Way 2 : you can insert website : http://www.repetier.com/download/ download the latest

epetierHost to the software install catalog.

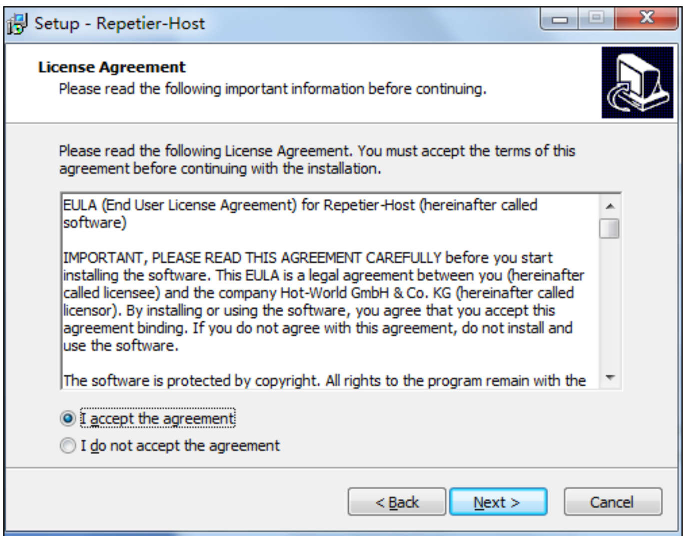
SETUP ONE: DOUBLE CLCK SETUPREPETIERHOST_0_95.EXE , ENTER THE SETUP INTERFACE.



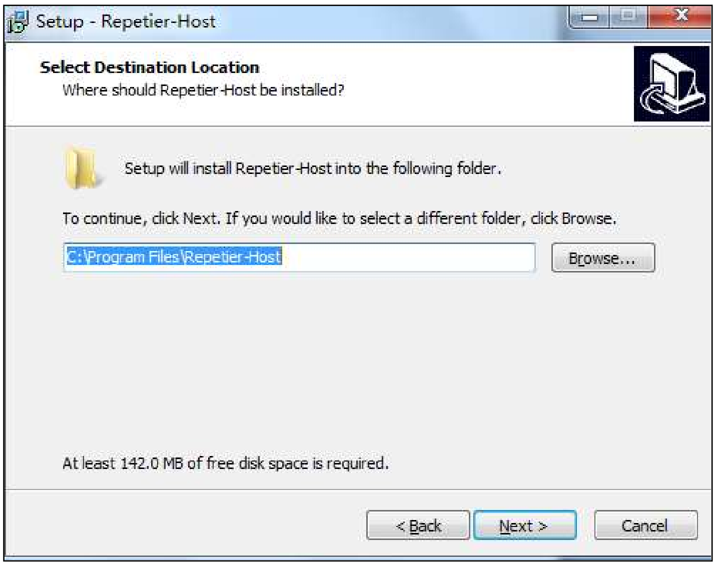
SETUP TWO: CLICK NEXT



SETUP THREE: SELECT AGREEMENT



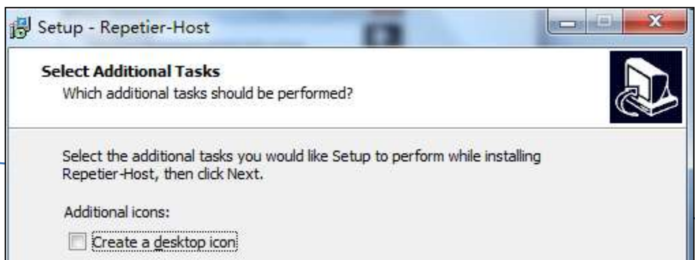
SETUP FOUR: SELECT FILE SETUP CATALOG



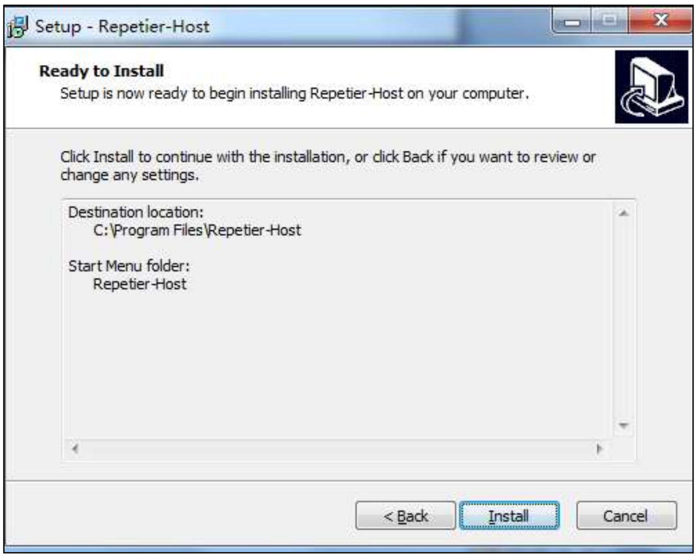
SETUP FIVE: CLICK NEXT



SETUP SIX: CLICK NEXT



SETUP SEVEN: CLICK INSTALL



SETUP EIGHT: WAIT FOR THE INSTALLATION IS COMPLETED, CLICK "FINISH"

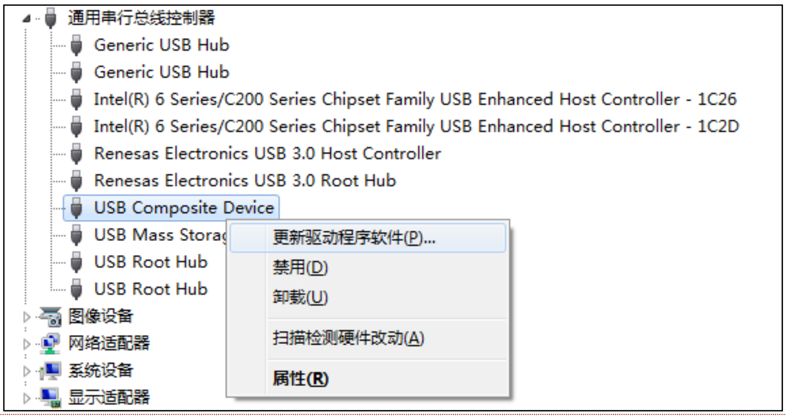


4.2 INSTALL DRIVER

4.2.1 ON THE DESK , RIGHT-CLICK “MY COMPUTER” CHOOSE “DEVICE MANAGER” , ENTER THE DEVICE MANAGEMENT INTERFACE.



4.2.2 CHOOSE USB COMPOSITE DEVICE , RIGHT-CLICK, COMPOSITE DEVICE.



4.2.3 IN THE DIALOG WINDOW SELECT DRIVER SOFTWARE



4.2.4 SELECT FIDI USB DRIVERS , CLICK NEXT

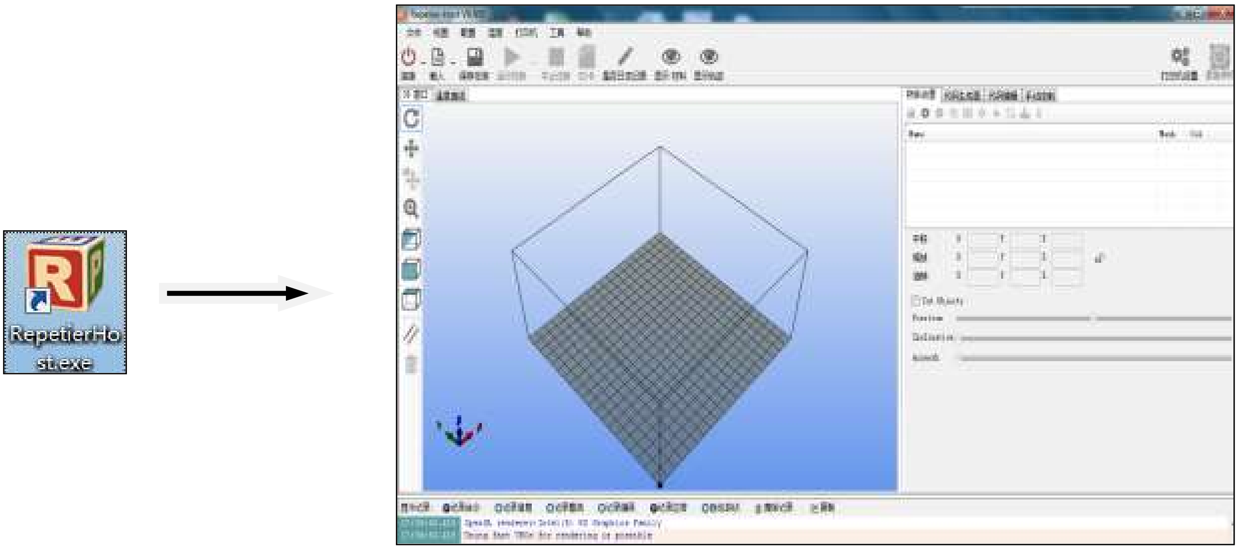


4.2.5 WAIT FOR FINISHED SETUP , CLOSE

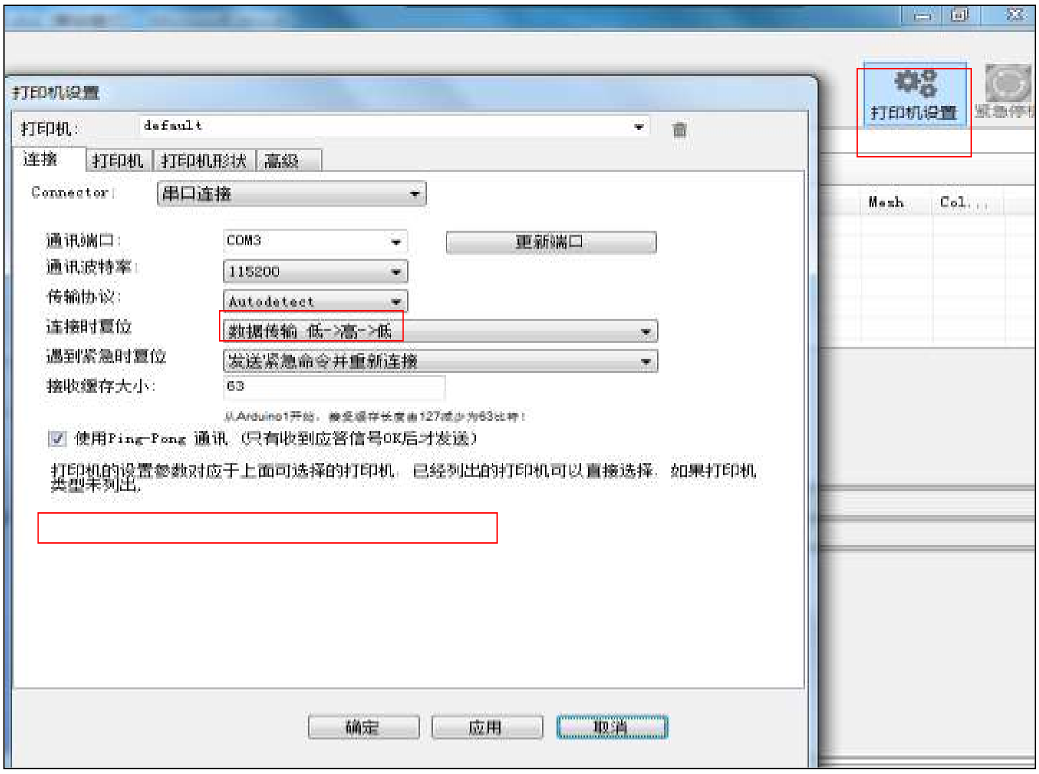


4.3. PARAMETERS SETTING

4.3.1 ON THE DESK , DOUBLE-CLICK REPETIERHOST.EXE , ENTER REPETIERHOST_0.95F USER INTERFACE.

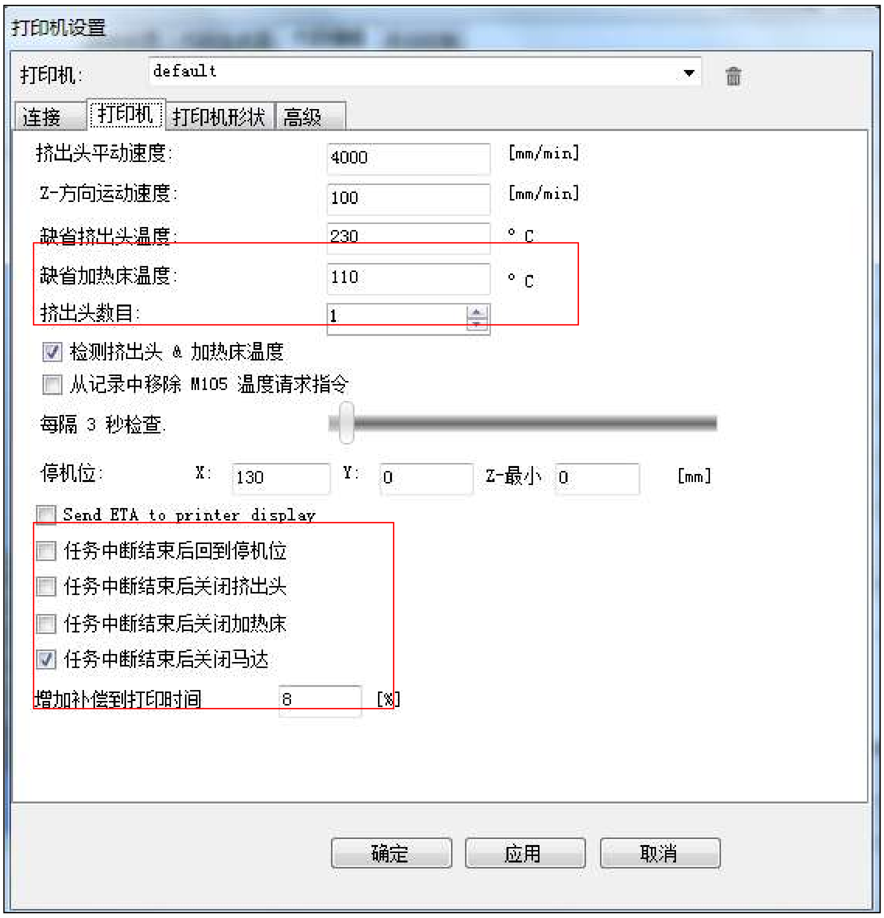


4.3.2 CLICK PRINT SETTING , SELECT “115200 BAUD RATE”, CLICK “USER PING-PONG COMMUNICATION

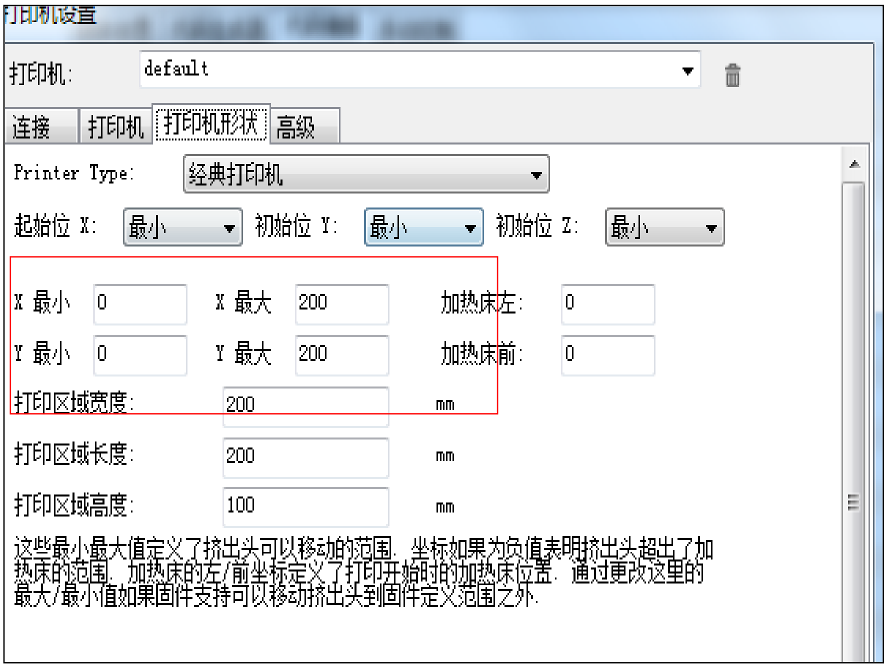


4.3.3 SET THE DEFAULT EXTRUSION HEAD , HOT BED TEMPERATURE

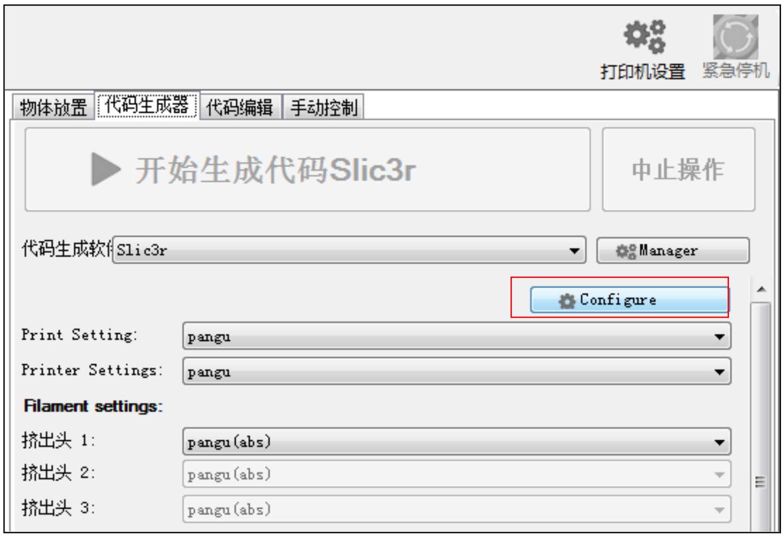
Click “printer” , select “ task interruption then close motor （ABS 230/110 ℃ PLA 190/60 ℃）



4.3.4 CLICK “PRINTER FORM” SET THE PRINTER ACTUALLY PRINT AREA.

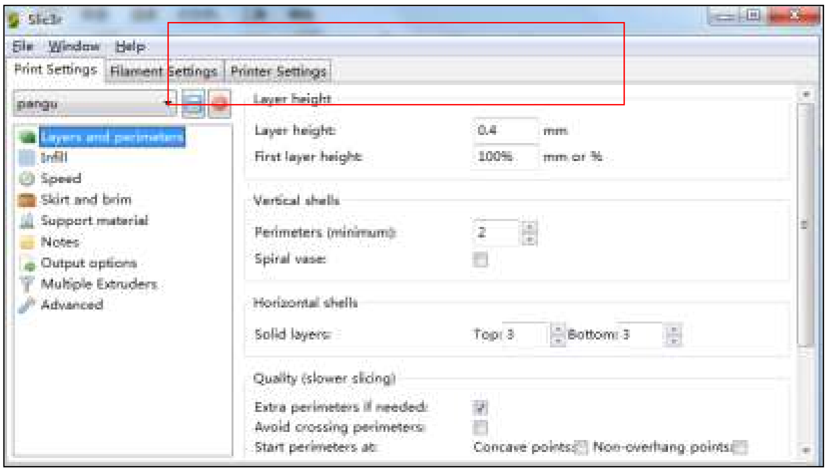


4.3.5 CLICK “CODE GENERATOR ”, SELECT CONFIGURE PARAMETER DEVICE.



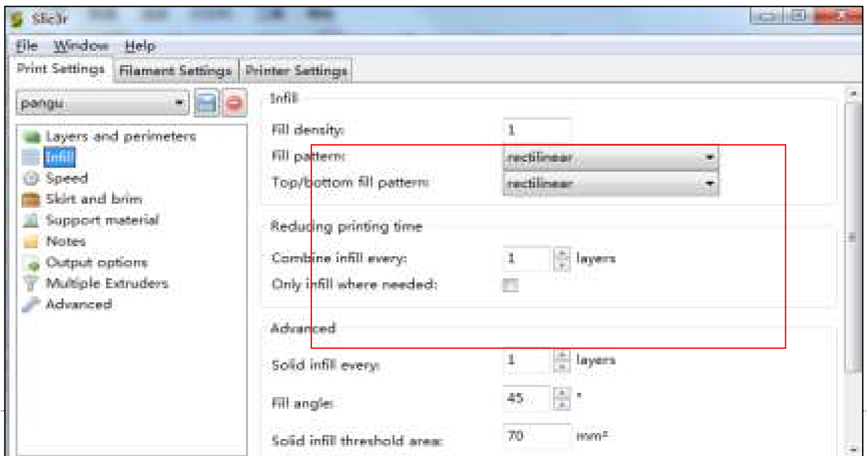
4.3.6 CLICK “PRINT SETTINGS” SETTING LAYERS THICKNESS

pangu 0.5mm nozzle and filament 3mm ABS for material.



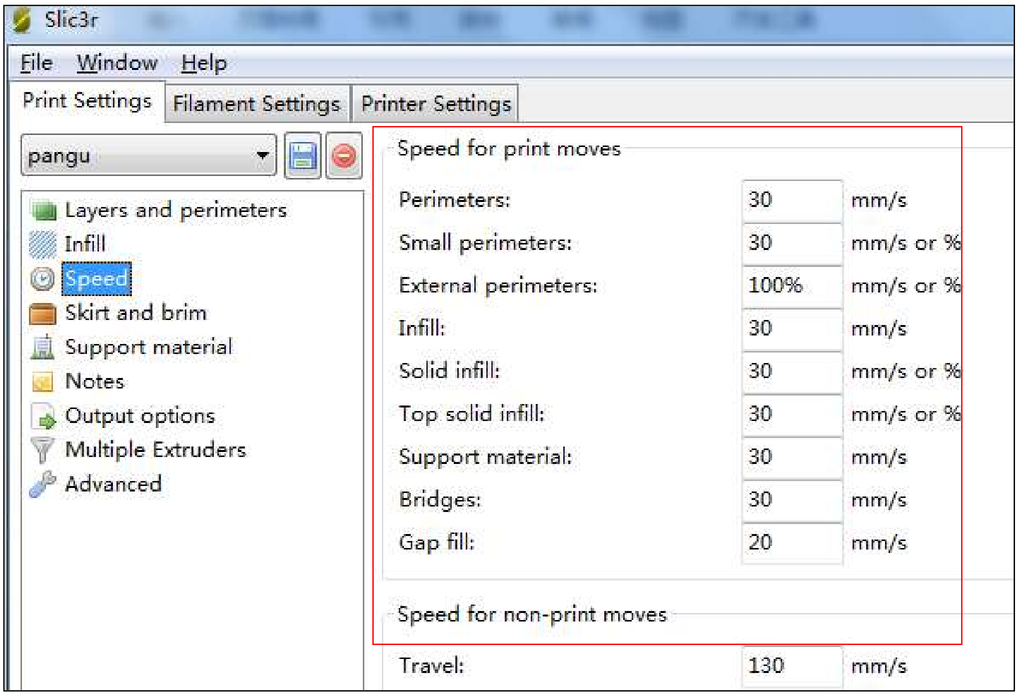
4.3.7 INFILL PROPORTION SETTING.

“1” for 100% solid fill , “0.5” for 50% solid fill.

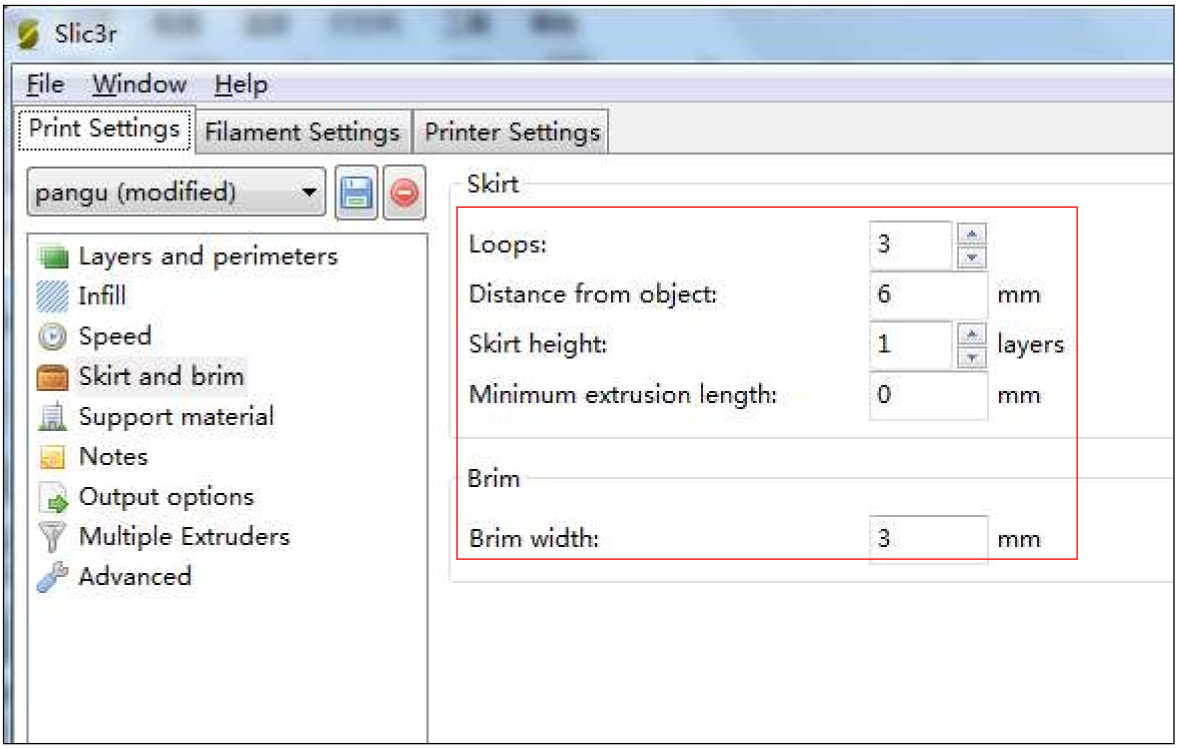


4.3.8 PRINT SPEED SETTING

The speed for 30mm/s is the safest.

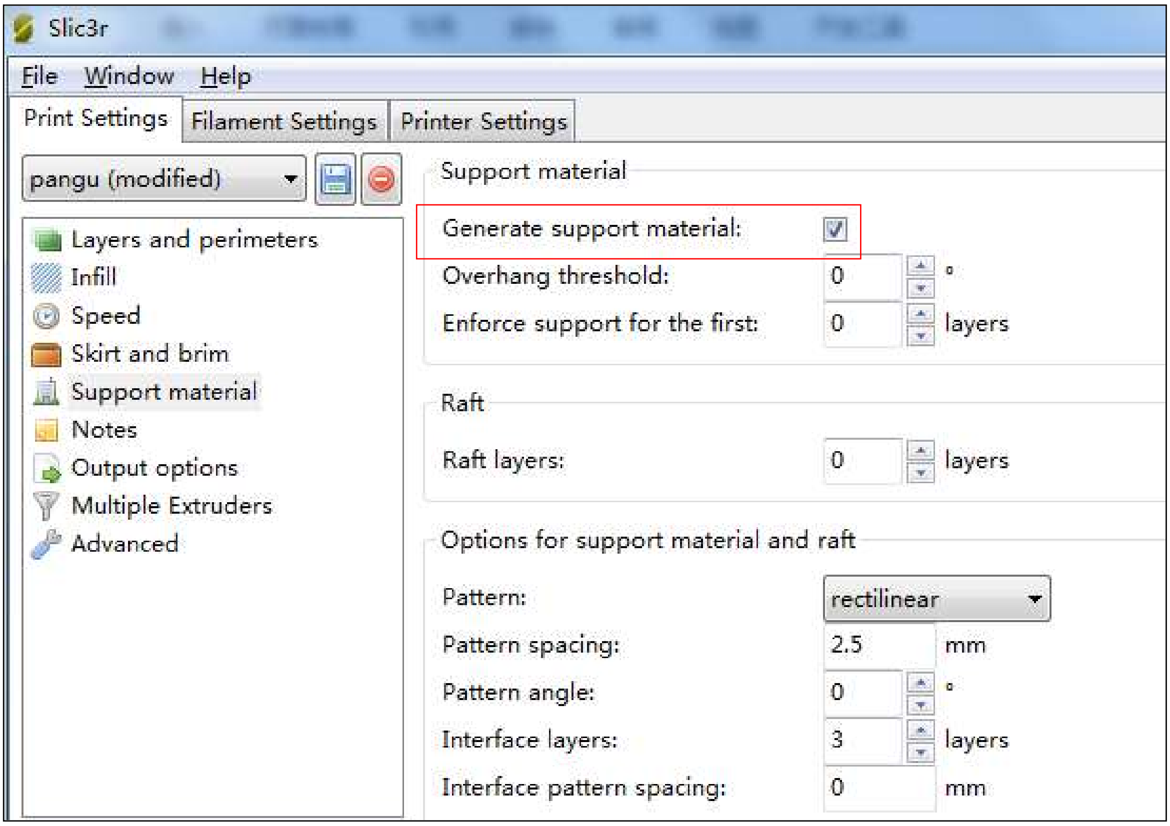


4.3.9 SKIRT AND BRIM SETTING.

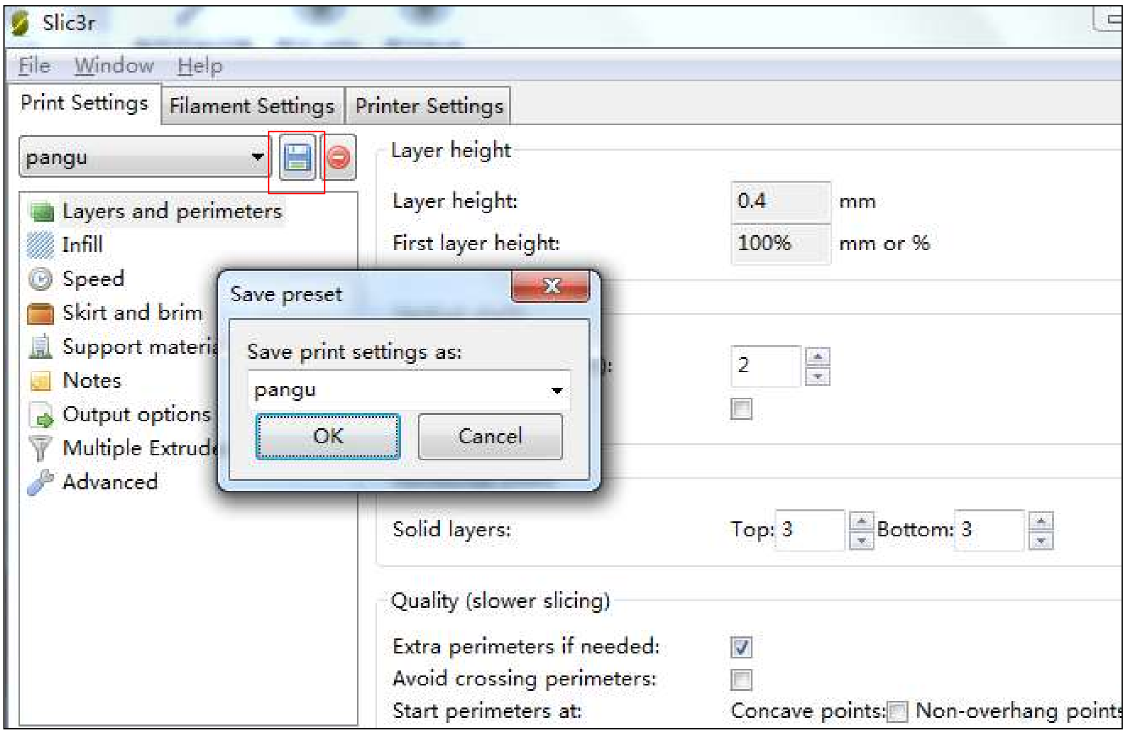


4.3.10 SUPPORT MATERIAL .SETTING.

Check there is support, not checked without support.



4.3.11 AFTER PRINT SET , SAVE IT.

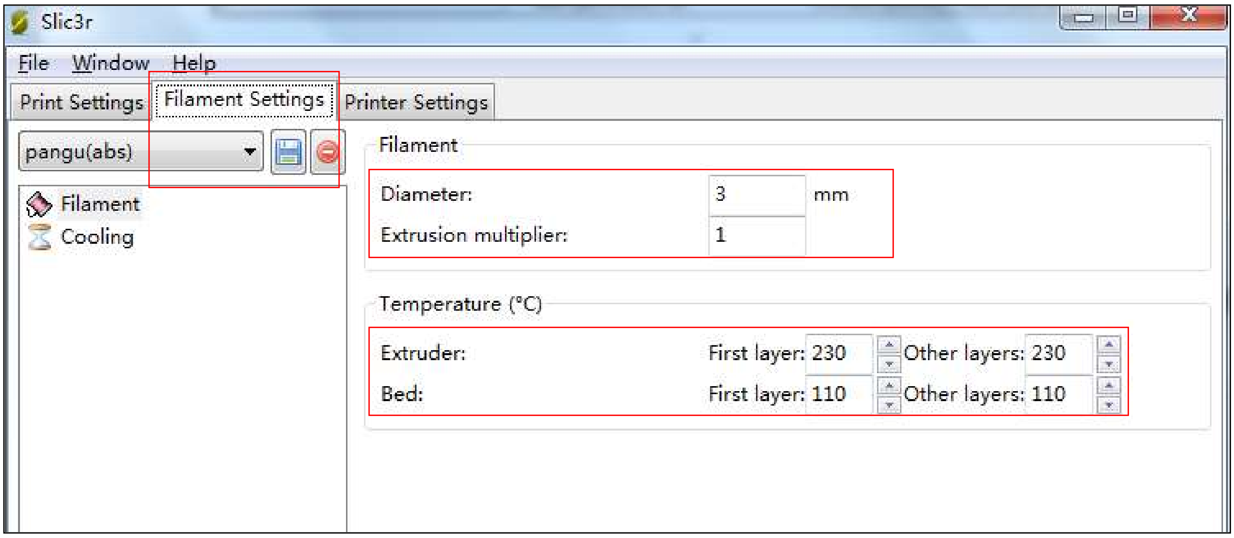


4.3.12 FILAMENT SETTING

Select filament window setting, filament diameter setting , number of extruder heads , extruder temperature and heated bed temperature, save it after finished . Filament diameter is 3mm and 1.75mm.

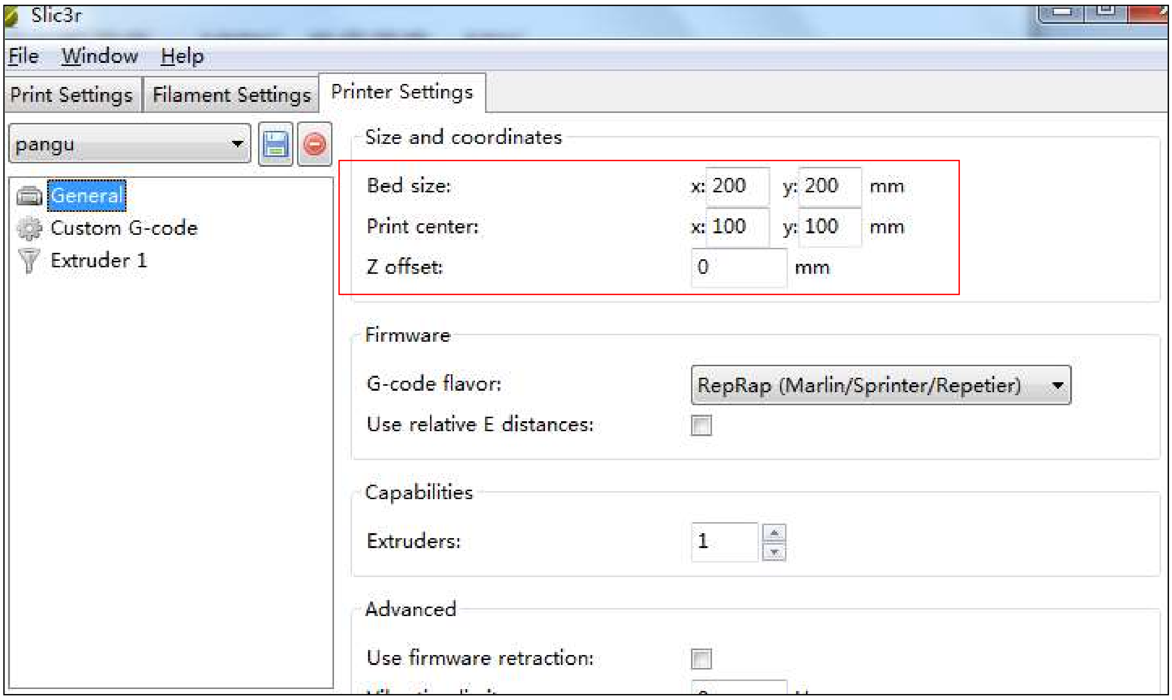
ABS filament extruder temperature : 230℃ Heated bed temperature : 110℃

PLA filament extruder temperature : 90℃ Heated bed temperature : 60℃



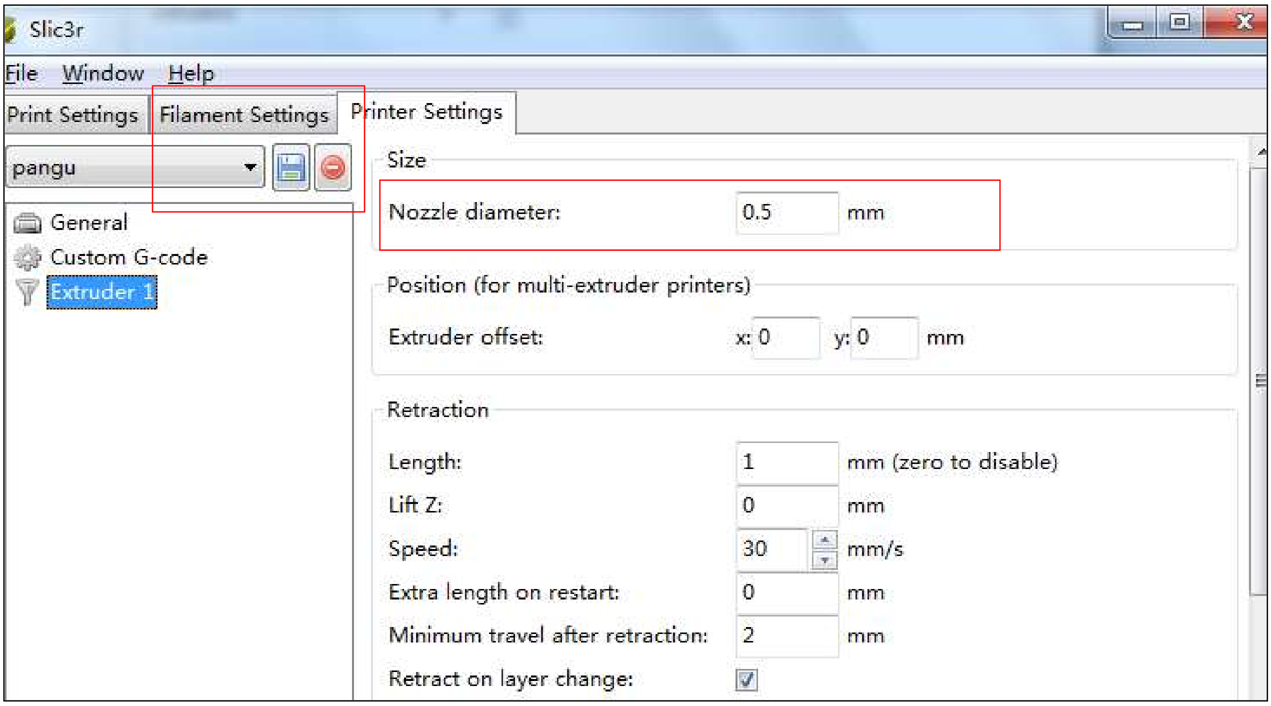
4.3.13 PRINTER SETTINGS

Select printer settings , set the bed size and print center.



4.3.14 NOZZLE SETTING

Nozzle is 0.3， 0.4， 0.5mm, according to the size of nozzle to set the diameter , save it.



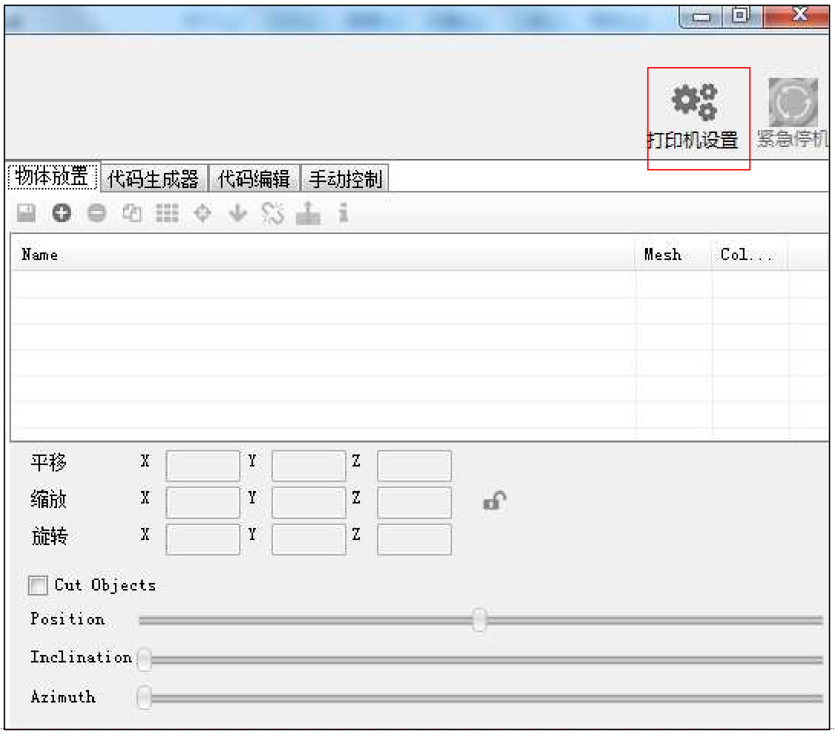
5. TEST 3D PRINTER

5.1． SUPPRESSED ZERO

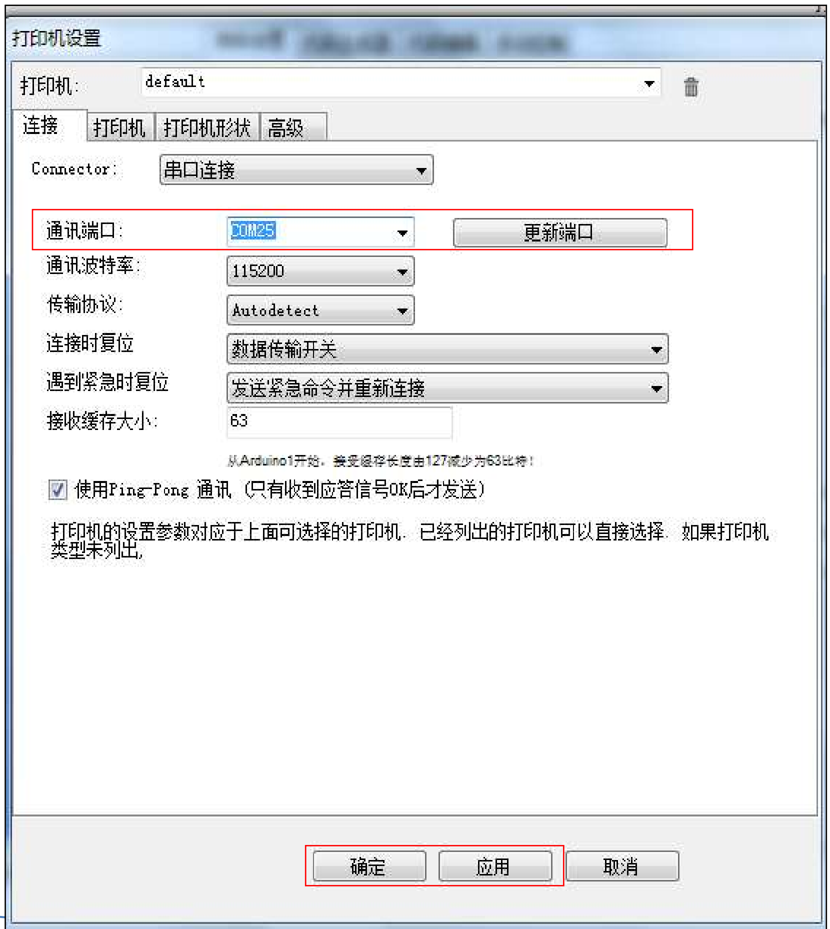
5.1.1 USE BUS DATA WIRE TO CONNECT COMPUTER AND 3D PRINTER



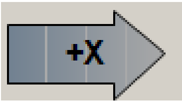
5.1.2 OPEN THE REPTEIER-HOST, THE COMPUTER WILL AUTOMATICALLY INSTALL THE DRIVER , WAIT UNTIL THE INSTALLATION IS COMPLETED ， SELECT " PRINT SETUP".

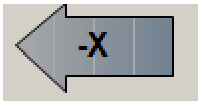


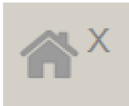
5.1.3 IN THE PRINT SETTING , CHOOSE "COMMUNICATION PORT " DROP-DOWN MENU SELECT THE PORT AND UPDATE IT , AFTER APPLICATION CONFIRM IT.



5.1.4 TRIAL THE X-AXIS DIRECTION AND ZERO.

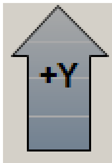
Click respectively 

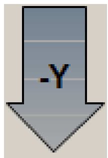
、 

and 

to control X-motor and to trial the x-motor-axis direction and zero;

5.1.5 TRIAL THE Y-AXIS DIRECTION AND ZERO

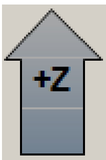
in proper order Click respectively 

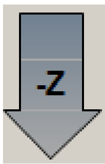
、 

and 

to control the Y-motor and to trial the Y-motor-axis direction and zero;

5.1.6 TRIAL THE Y-AXIS DIRECTION AND ZERO

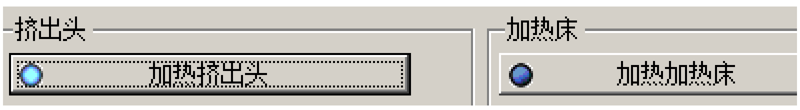
Click respectively 

、 

and 

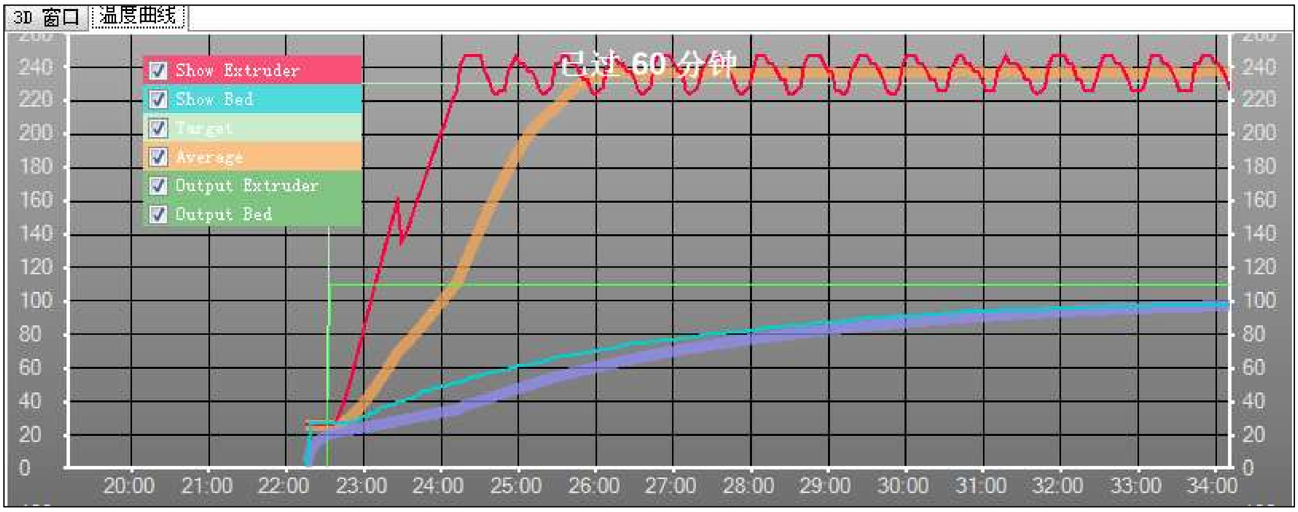
to control the Y-motor and to trial the Y-axis-motor direction;

5.1.7 TRAIL THE HEATED BED AND EXTRUDER TEMPERATURE.

CLICK RESPECTIVELY 

LIGHT BUTTON (BUTTON LIGHT IS OPEN), OPEN THE TEMPERATURE CURVE TO VIEW THE CHANGE CURVE OF THE EX-

TRUDER HEAD AND HEATED BED. ABS FOR EXAMPLE, EXTRUDER HEAD TEMPERATURE FLUCTUATION AT 230℃, THE HEATED BED TEMPERATURE FLUCTUATION AT 110℃.



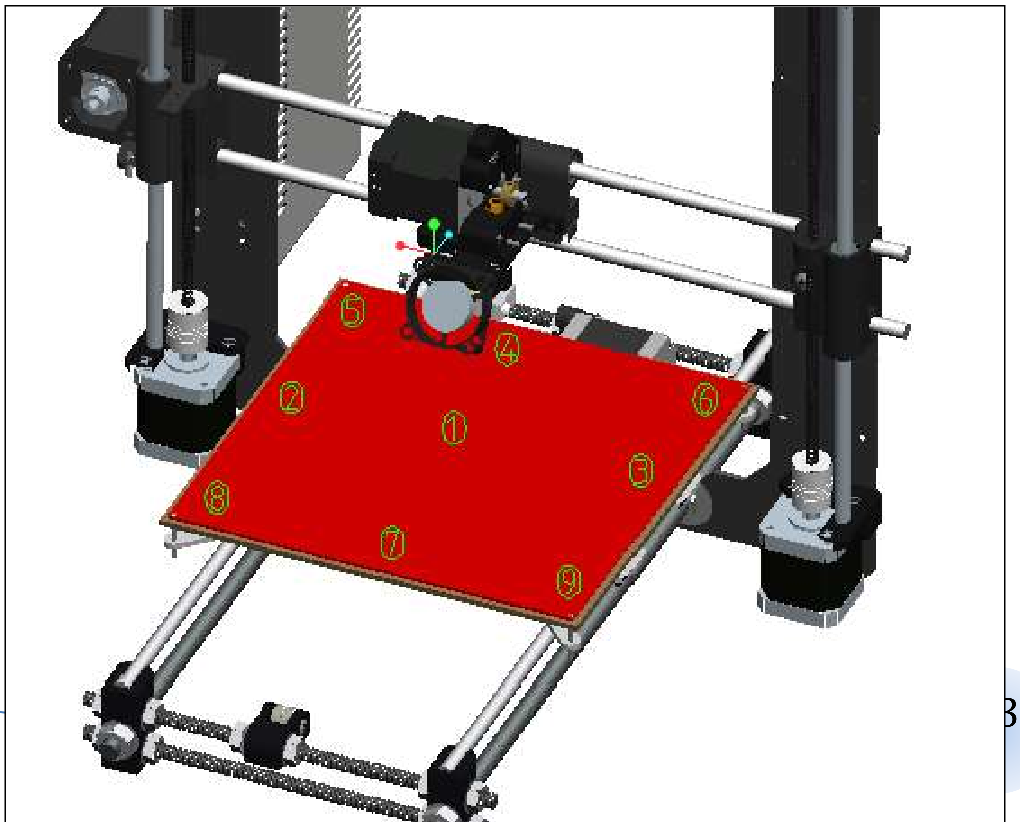
5.1.8 TEST EXTRUDER MOTOR

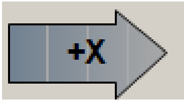
Click respectively 

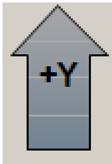
and 

check the extruder motor rotation (parameter can be set)

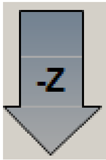
5.1.9 ADJUST THE BALANCE OF Z-AXIS AND HEATED BED



5.1.9.1 Click respectively 

and 

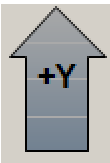
, adjust the X、Y position , move the nozzle to the heated bed center surface on ①.

5.1.9.2 Click 

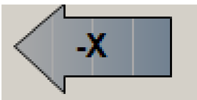
move the nozzle down , adjusting it to connect just on the heated bed center surface ①

5.1.9.3 Adjusting endstops position which is just press the endstops. Click 

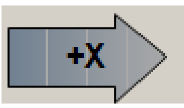
to press the nozzle just on the heated bed center surface ①, the distance is about a sheet of A4 paper thickness;

5.1.9.4 Double-click 

arrow position 's first gird, move the nozzle up 0.2mm , to observe the distance a of the nozzle and heated bed's center surface ①

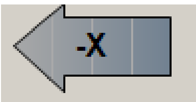
5.1.9.5 Click 

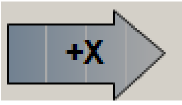
the back arrow 's third gird , move the nozzle from left 100mm , which is moving to the heated bed surface on ②, to observe the distance b of the nozzle and heated bed surface ②, if b higher than a, contratotate to left of the couplings. Make b and a are equal; if b less than a . Clockwise rotation to left of the couplings. Make b and a are equal.

5.1.9.6 Double click 

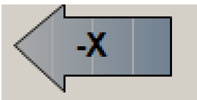
the back arrow 's third gird, move the nozzle from right 200mm, which is moving to the heated bed surface on ③, to observe the distance c of the nozzle and heated bed surface

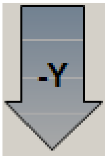
③ ,if c higher than a, contratotate to right of the couplings , Make c and a are equal; if c less than a; Clock-wise rotation to left of the couplings. Make c and a are equal.

5.1.9.7 Click 

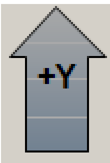
, 

move the nozzle around left-right to heated bed surface on ①、②、③, To observe the three points whether on the same plane; if it is not on the same plane, please repeat operation 1.8.4——1.8.5, adjust it till to the same plane, then the three points and heated bed of the distance from the surface for a.

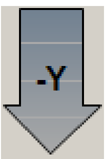
5.1.9.8 Click 

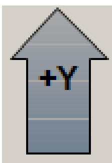
move the nozzle from left to the heated bed surface on ②, then the ② and heated bed of the distance from the surface for a. Click 

the back arrow 's third gird, move the noz-zle from front 100mm, which is moving to the heated bed surface on ⑤, to observe the distance d of the nozzle and heated bed surface ⑤, ,if d higher than a, tighten the heated bed screw at the bottom, make d and a are equal; if d less than a , loose the heated bed screw at the bottom, make d and a are equal.

5.1.9.9 Double click 

the back arrow 's third gird, move the nozzle from front 200mm, which is mov-ing to the heated bed surface on ⑧, to observe the distance f of the nozzle and heated bed surface ⑧, ,if f higher than a, tighten the heated bed screw at the bottom, make f and a are equal; if f less than a , loose the heated bed screw at the bottom, make f and a are equal.

5.1.9.10 Click 

, 

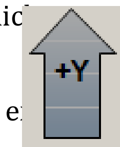
move the nozzle around front-back to heated bed surface on ②、⑤、⑧, To observe the three points whether on the same plane; if it is not on the same plane, please repeat opera-tion 1.8.t——1.8.8, adjust it till to the same plane, then the three points and heated bed of the distance from the surface for a.

5.1.9.11 In the same way, move the nozzle around front-back to heated bed surface on ③、⑥、⑨, ensure that the three points and nozzle of the distance from the surface for a. Then the seven point of ①、②、⑤、⑧、③、⑥、⑨ distance are equal with heated bed surface, Z-axis is balance with heated bed.

5.1.9.12 Click  let three directions of X、Y、Z origin on one point. Click arrow X、Y, for X、Y in any direction is balanced.

5.2. TEST PRINTS

5.2.1PRE-TEST PREPARATIONS

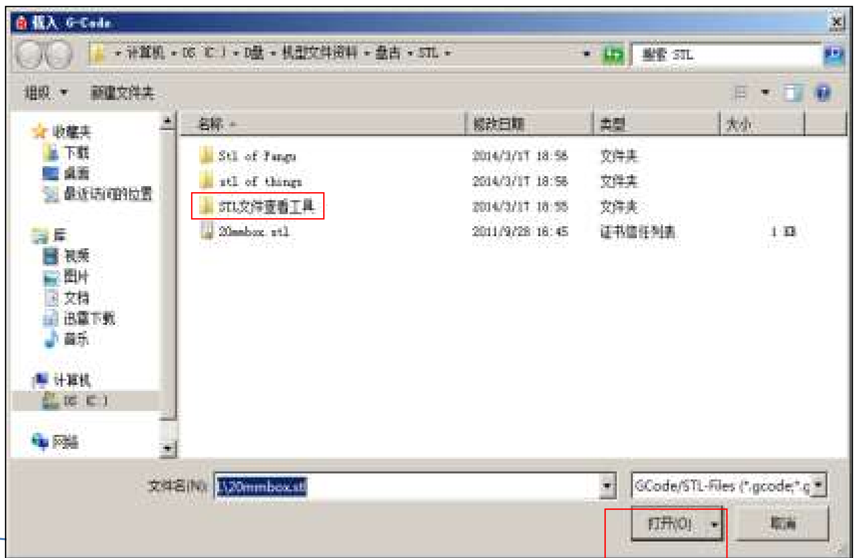
5.2.1.1 Put the filament which are to be printing into J-head nozzle, clic

The extruder rise to the heated bed surface on a certain level, heating e head and heated bed.

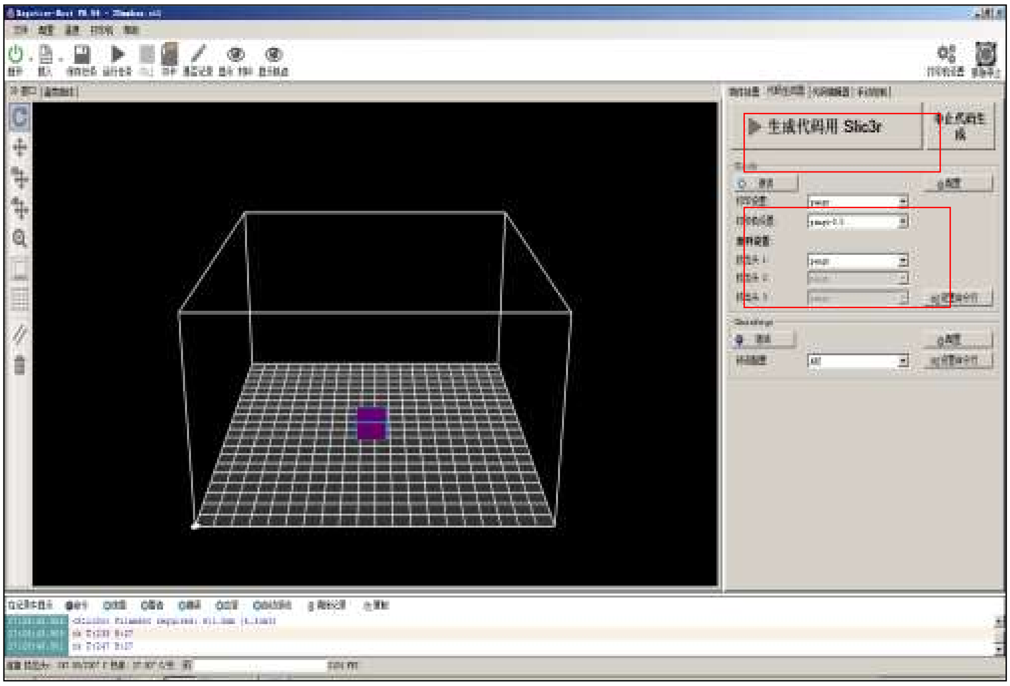
5.2.1.2 Wait for the extruder reaches a high enough temperature , click 

check the extruder discharge material whether is smooth.

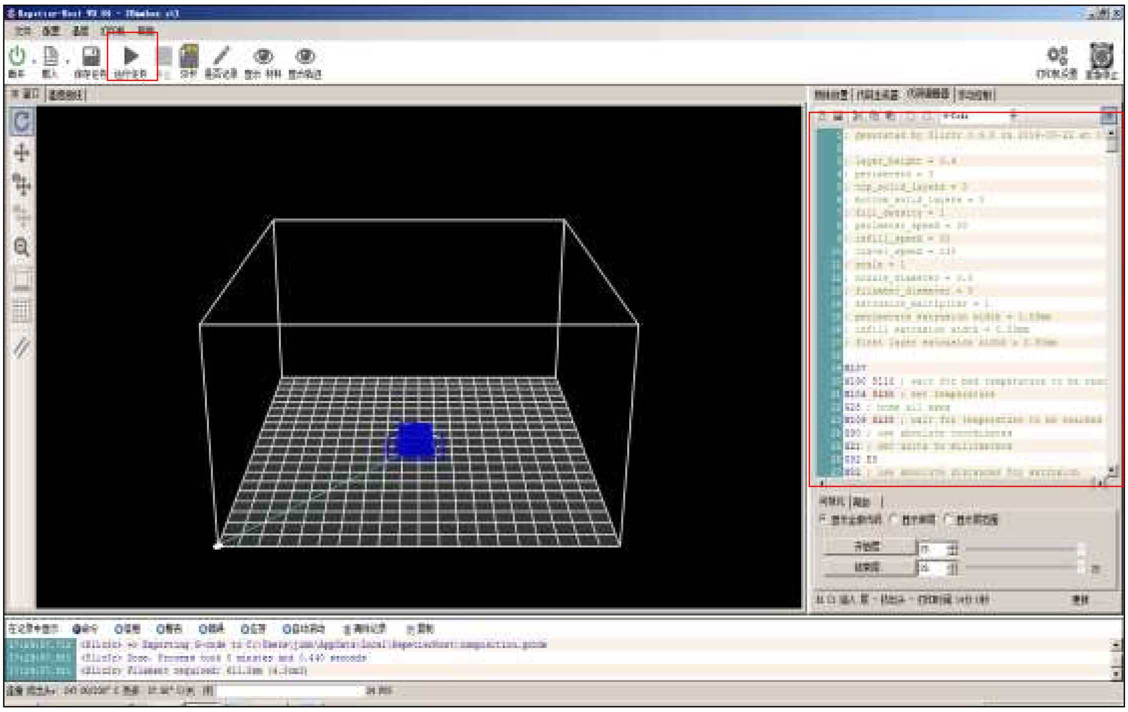
5.2.2 OPEN THE BOX DOCUMENT STL BY NETFABB



5.2.3 SELECT THE APPROPRIATE SETTING, TO GENERATE G-CODE



Wait for being finished printing , test box size is :20*20*10mm



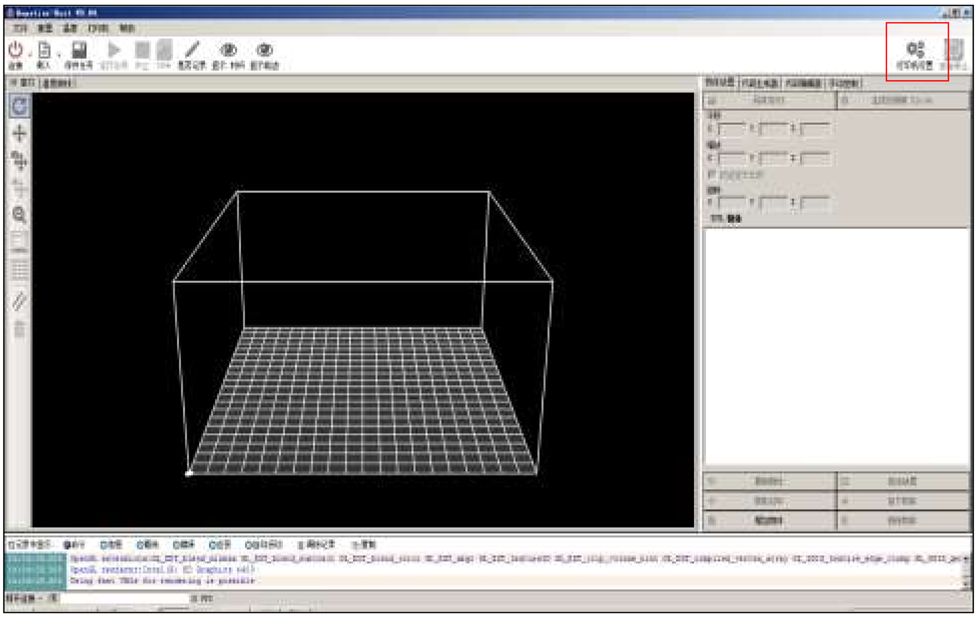
6. 3D PRINT

6.1. USE PC PRINT

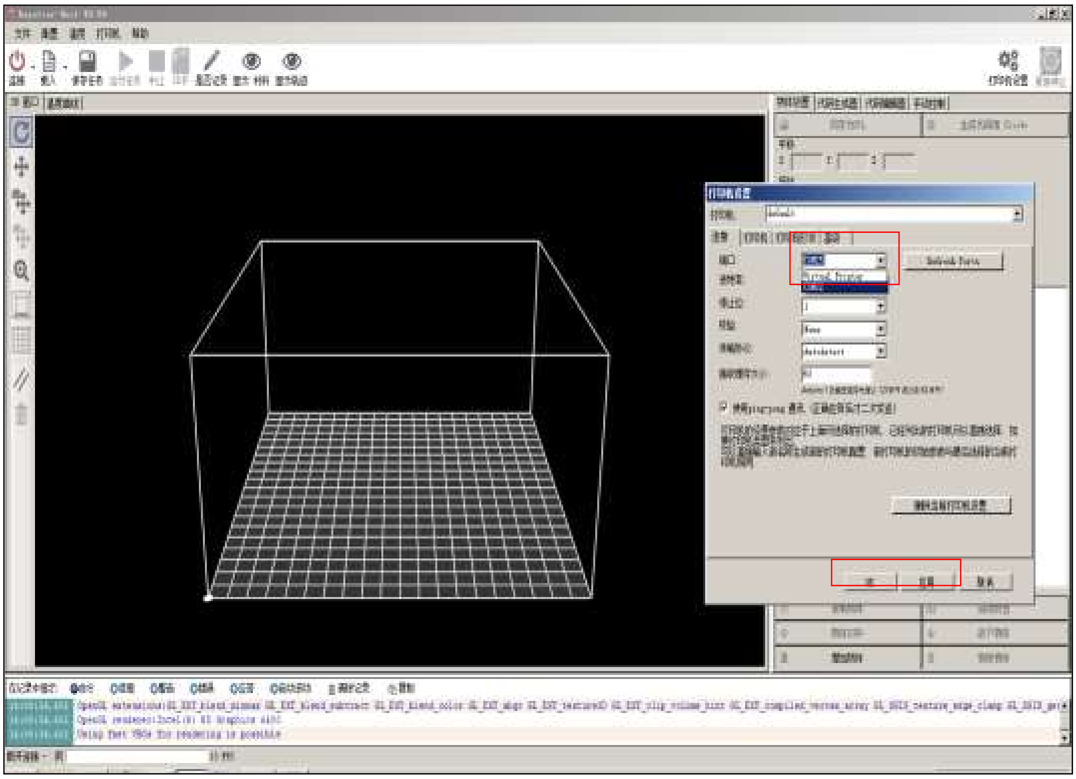
6.1.1 USE USB WIRE CONNECT 3D PRINTER WITH COMPUTER



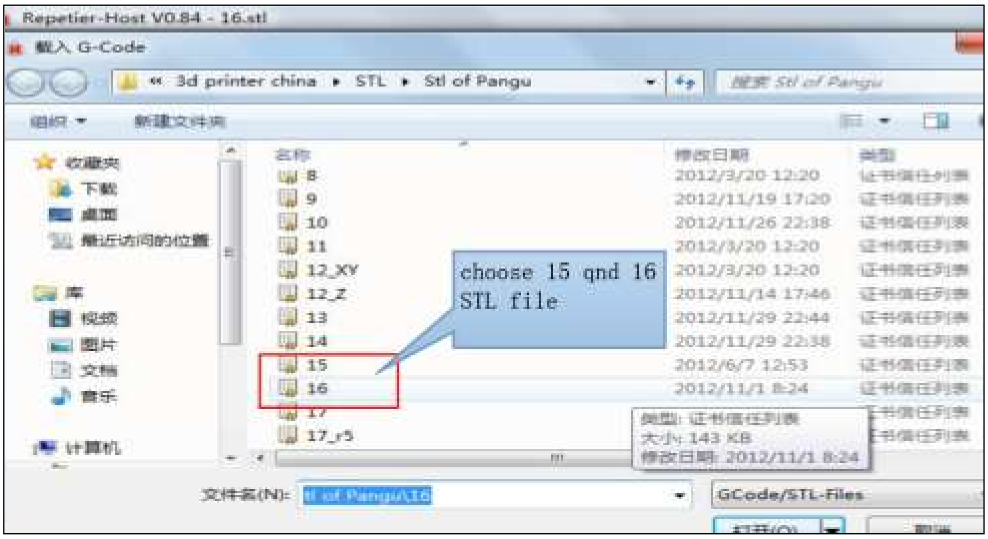
6.1.2 OPEN REPETIER-HOST, SELECT "PRINT SETTING"



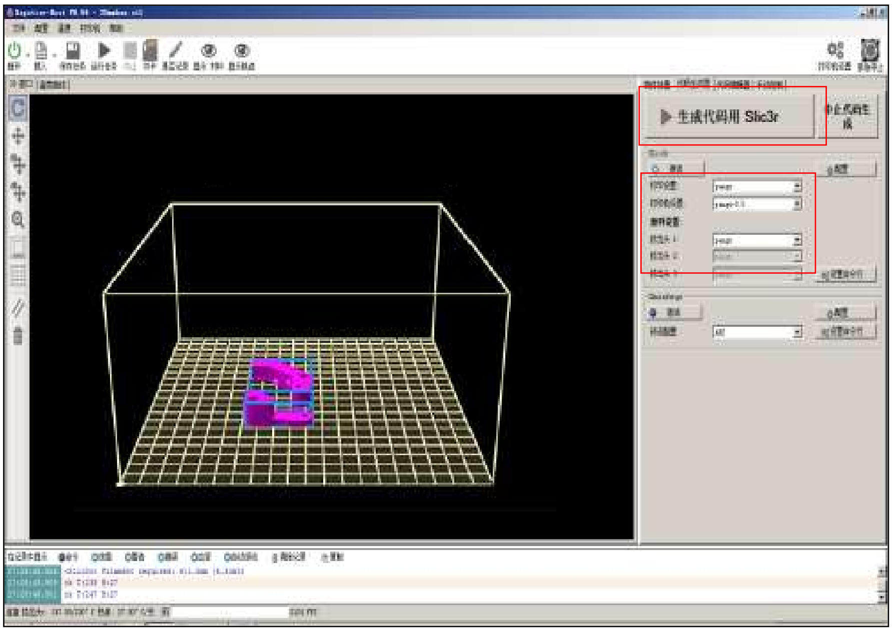
6.1.3 UPDATED 3D PRINTER PORT, USE IT AND CONFIRM IT .



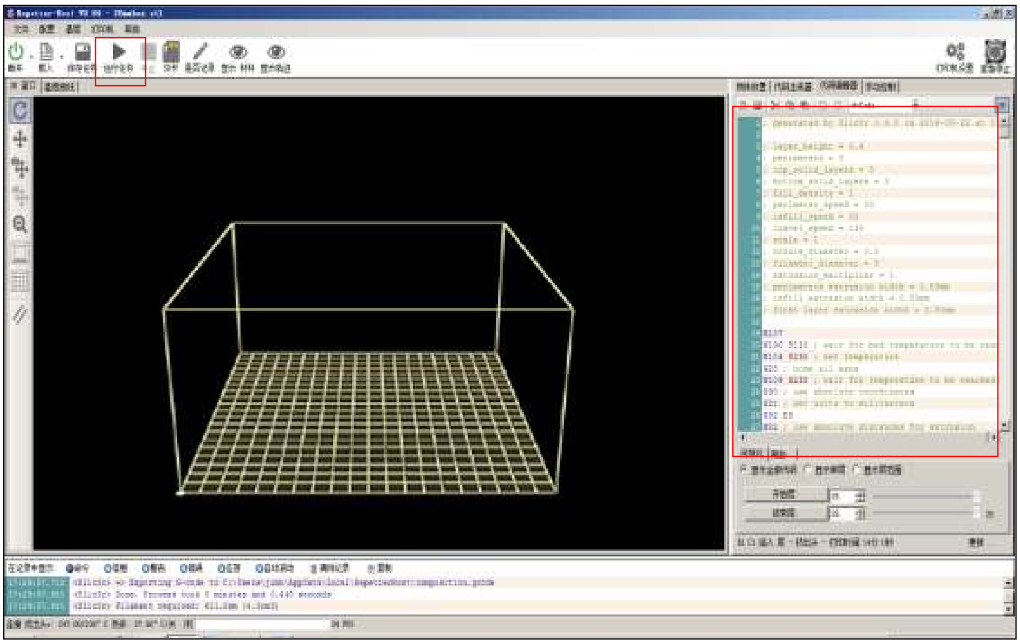
6.1.4 OPEN THE STL FILE WHICH YOU ARE PRINTING



6.1.5 SELECT APPROPRIATE SETTINGS, AND GENERATES THE G-CODE



6.1.6 WAIT FOR THE CODE IS GENERATED , CLICK "RUNNING TASKS" THEN COMPUTER CAN PRINT.



6.2. USE SD CARD PRINT

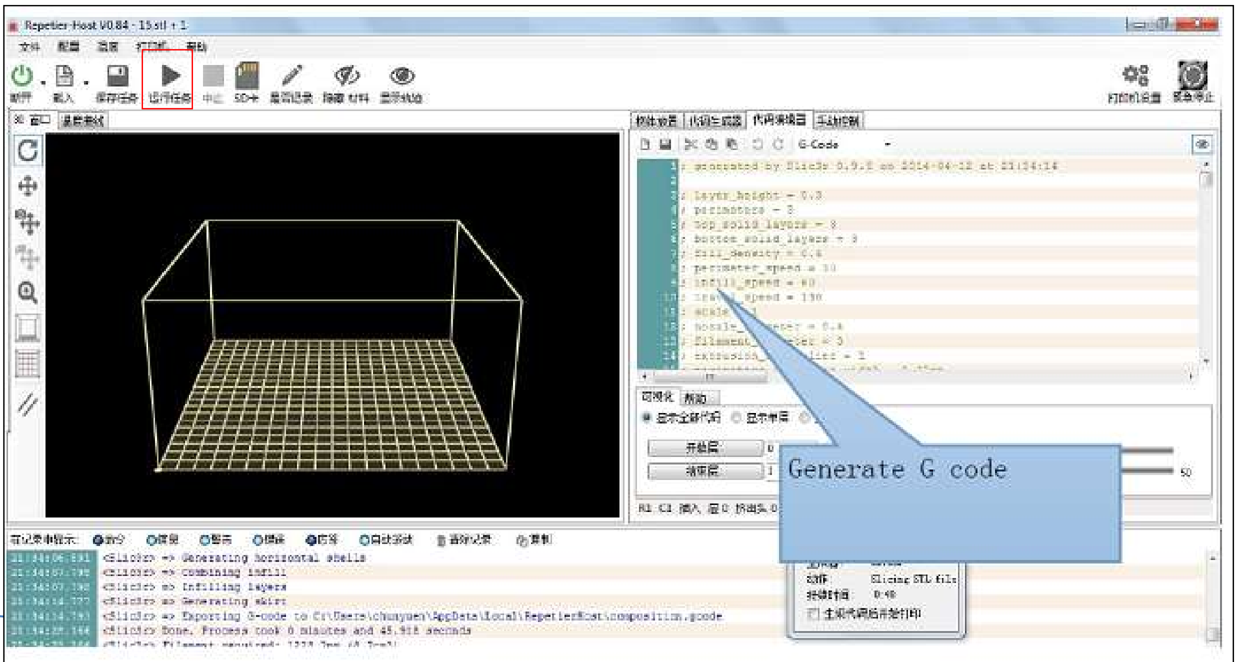
Use SD card print is called off-line printing, rational use off-line which can effectively improve print efficiency .

6.2.1 SD CARD INSERT IN COMPUTER THROUGH THE CARD READER , SAVE THE G-CODE ON SD CARD.



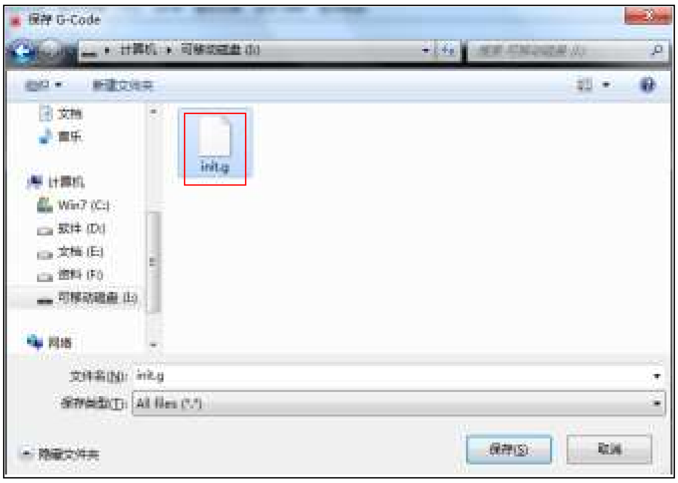
;

Way 1 : Put the G-code file on the SD card , in Repetier-Host select start printing file on the SD card, then you can plug-off USB wire.

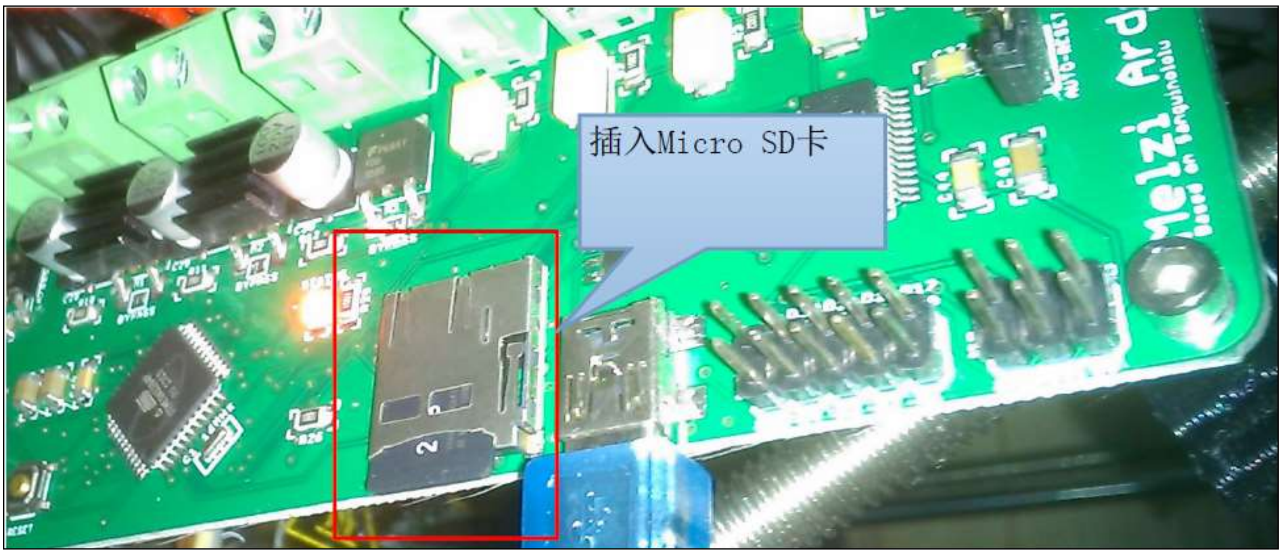


Way 2: Rename the G-code file to init.g which you are printing , put it under the SD card catalog, restart printing, press the reset key-press or power-down and on again , the printer will automatically print G-code init.g.





6.2.2 INSERT THE SD CARD TO ELECTRONICS, DIAL THE USB WIRE WHICH CONNECT WITH COMPUTER, FOLLOW THE ABOVE TWO METHODS CAN OFF-LINE PRINT.



7. F&Q

7.1. WHAT TO DO IF FILAMENT IS RUNNING OUT ?

Heated to 230, stop the motor , pick up spring , pull out the old one and change the new one.

2.If the material is not attached on the board , which fail to stick , run with nozzle , how to solve it ?

1、Please check the heated bed temperature is enough, PLA is ℃, ABS is 110℃.

2、 Please check the first layer of wire, it should be flattening on the heated bed. If it is not enough flat, please adjust a bit trigger position of the Z-axis endstop , make the nozzle distance closer to the heated bed.

3、But do not too flat , the first layer thickness is compressed about half the stander layer thickness.

4、 What to do if nozzle is in a jam? What to do if extruder idle? What to do if it is not discharge material.

There are two drill bit , one is 3mm , and drill nozzle feed back into the big hole ; another is 0.4mm, the way to slove the in jam of drill front nozzle small hole is : remove the nozzle , use nipper plier grip drill, hand-operation drill, when heated to 230℃, to simulate the process of nozzle , drill big hole (note: use drill bit to pick up the waste and garbage in several times), drill small hole, and operation again , then the nozzle would be a new one.

8. CONTACT US

Shenzhen RP3D Technology Co. Ltd is a leader of open-source 3D printer in domestic, the pioneers and practitioners of open source hardware concept, Pangu designers , manufacturers of open source 3D printer.

Company address: Firstfloor,Building D, Ganghua Technology Park,Lixin Road, Danzhutou, Long-gang District, Shenzhen, China

Telephone :+86 755 2870 0806

Mobile : +86 133 1656 0709

Contact person : Chris

e-mail: chris@rp3d.com

Website: http://www.rp3d.com/, http://www.rp3d.com.cn/

Alibaba: http://szrp3d.1688.com/

Taobao shop :http://rp3d.taobao.com/